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ORIGINAL ARTICLES.

ŒSOPHAGOSTOMY FOR CICATRICIAL STRICTURE.

JOHN B. ROBERTS, M.D., PHILADELPHIA.

A boy, three and one-half years old, had swallowed, three months previous to my examining him in December, 1894, a solution of lye, which resulted in stricture of the œsophagus. It was said that a month before he came under my observation a rubber catheter could be passed through the contracted portion of the gullet. Upon examination I found the child greatly emaciated and very weak. I attempted to pass a flexible catheter down the œsophagus, but even the smallest was arrested by a constriction at its upper part. A whalebone filiform bougie, such as is used in urethral surgery, was without much difficulty, however, pushed downward and apparently passed through the contracted portion of the tube.

As the child was evidently starving to death, I determined to operate upon him. My first intention was to do a gastrotomy. The bougie passed down the œsophagus from the mouth would, I thought, have enabled me to draw a strong ligature from the stomach upward through the stricture. This would have been used to cut the stricture, as in Abbe's string-saw method. Careful

examination of the patient, however, convinced me that the contraction was situated at a point sufficiently high to enable me to open the œsophagus below it. I accordingly performed œsophagotomy by making an incision along the anterior edge of the left sterno-mastoid muscle. I opened the œsophagus a little below the level of the cricoid cartilage and introduced a No. 12 soft rubber catheter into the stomach. The edges of the œsophageal wound were then stitched to the skin and the catheter allowed to remain for the introduction of liquid food into the stomach. There was some difficulty in identifying the œsophagus, which was necessarily small; because of the character of the lesion and the position of the thyroid gland. The left lobe of the thyroid gland extended to a higher level than the top of the larynx.

About half an inch above the first œsophageal incision I made a second opening into the œsophagus above the seat of constriction, and passed a rubber catheter upward into the mouth. Between these two openings the œsophagus walls were largely cicatricial. I endeavored to dilate or lay open this por-

tion of the tube, but was not successful. The point of a pair of forceps, introduced into what seemed the calibre of the œsophagus, when forced upward passed backward behind the wall of the pharynx. The child's condition was so bad that I did not care to prolong the etherization while I endeavored to lay open or cut away the cicatricial tissue, and I accordingly determined to postpone further operation until the child could be nourished for a few days through the catheter used to convey liquid food into the stomach. The catheter which had been introduced into the portion of the œsophagus above the stricture, and which protruded from the mouth, was withdrawn.

The child was fed on peptonized milk and stimulants in small quantities, but did not seem to rally well. On the tenth day a purpuric spot about four inches in diameter appeared upon the abdomen. This subcutaneous hemorrhage increased, the child became weaker, and died on the sixteenth day. It was impossible to keep the seat of operation aseptic, because food and mucus contaminated the wounded surfaces notwithstanding the greatest care on the part of the nurse. Frequent washing of the part with mild antiseptic solutions was therefore maintained. The post-mortem examination showed that about three inches of the œsophageal walls were almost entirely destroyed by suppuration. This rendered it difficult to preserve the connection between the upper and lower portions during removal of the specimen. The bodies of the vertebræ at this point were exposed, and the inter-vertebral cartilages loose. Some of them could have been easily removed by picking them out with forceps. The spaces between the loosened cartilages and the bones were filled with a dark foul-smelling pus. There was an area of consolidation about the root of the right lung, posteriorly; incision into this portion of the lung showed it to contain material similar in appearance, and of the same odor as that in the region of the wound.

The life of this child could without much doubt have been saved if a surgical operation had been undertaken at the time it was possible to introduce a catheter through the constricted portion

of the œsophagus. The fact that I was still able to get below the seat of stricture at the time of operation makes me feel pretty confident that systematic dilation, either with or without an œsophageal opening made below the seat of stricture, would have permitted sufficient distention of the lumen of the tube to have permitted successful feeding.

The suppurative inflammation which occurred in the posterior mediastinum was largely due, I presume, to the difficulty of keeping the wound aseptic, and to the somewhat extensive disturbance of parts which I made in identifying and incising the œsophagus at the bottom of the operative wound. This complication would almost certainly have been avoided if I had adhered to my original intention of opening the stomach and cutting the stricture by a string-saw. It seemed to me, however, that there was less risk to the patient in making an opening in the cervical region into the œsophagus, and cutting through the stricture by a string or other device. Curiously enough, however, after I had made the opening into the œsophagus, I could not get the filiform bougie to pass through the strictured tissue and appear in the calibre of the opened gullet. It is possible that the filiform bougie, which I supposed I had passed through the stricture into the stomach two days before the operation, did not go down the œsophagus. It may have perforated the wall at the stricture and entered the posterior mediastinum, being the real origin of the inflammation of the mediastinal tissues found at the post-mortem examination.

Pregnancy and Exophthalmic Goitre.

Signier (*Repertoire Universel d'Obstet. et de Gynec.*, June 25, 1895) describes a case where exophthalmic goitre began with a pregnancy, the symptoms ameliorating after delivery. He believes that the pregnancy was really the cause of the enlargement of the thyroid gland. Possibly the diminution in its size after parturition depended on some temporary condition in connection with the puerperium. Even so simple a cause as the necessary rest may explain the favorable change which, after all, may not prove permanent.

NOVEL METHOD FOR MAJOR OPERATIONS WITHIN THE NASAL CAVITIES.

CARL SEILER, M. D., PHILADELPHIA.

For a number of years past, in fact ever since the introduction of cocaine as a local anæsthetic in intra-nasal surgery, I have avoided as much as possible the employment of general anæsthesia as cumbersome and unpleasant to both the patient and the operator; and in the majority of cases requiring but slight surgical interference and the performance of the minor operations, such as galvano-cautery, removal of polypi or ecchondroses, extirpation of the pharyngeal tonsil, and even straightening of the nasal septum, cocaine properly applied for a sufficient length of time before the operation I have found to answer all purposes. This local anæsthesia has the inestimable advantage in these by no means simple or easily performed operations, of securing for the operator the co-operation of the patient by not rendering him unconscious, the patient thus being enabled to remain in the upright position, the usual one for examination, throughout the operation; can dispose easily and without inconvenience to the operator, of any flow of blood, so that the operation need not be interrupted by any slight hemorrhage; and, what is of even greater importance, the topographical position of the parts in relation to the body of the patient, to the operator, and to the source of illumination remain the same as in ordinary examination of the nasal cavities, the knowledge of which relative positions, by long practice, has become, so to speak, automatic on the part of the operator, so that they are not consciously thought of by him during the operative manipulations if unaltered.

In those cases, however, in which the major operations within the nasal and oral cavities, such as the removal of fibroid polypi in the post-nasal or nasopharyngeal cavity, of sarcomatous tumors, or of benign tumors invading the adjacent cavities, of necrosed bone in the posterior-nasal chambers, the ex-

tractions of large rhinoliths or impacted and incruusted foreign bodies, etc., are necessary, cocaine or any other purely local anæsthetic is not applicable, because the site of operation cannot be reached with the cocaine solution, and because the extent of surface to be anæsthetized is either too extensive or altogether unknown to the operator before the operation, and general anæsthesia must of necessity be resorted to in order to keep the patient submissive and quiet, besides rendering the surgical procedure painless; under these circumstances it becomes necessary to place the patient in a recumbent position, which at once puts the operator at a disadvantage, because it, in the first place, alters the topographical relation of the parts to the operator, puts adequate illumination of the nasal cavities out of the question altogether, or makes it extremely difficult, and, what constitutes the greatest objection, allows the blood to flow into the larynx and pharynx unperceived by the operator, and in such quantities as to endanger the life of the patient by suffocation if he is placed in the usual position—either on his back or on his side. This latter difficulty is usually obviated by plugging the post-nasal cavity, prior to the administration of the general anæsthetic, if the operation is to be undertaken in either of the anterior nasal chambers, or by a preliminary tracheotomy and plugging of the superior laryngeal cavity, if the naso-pharyngeal cavity has to be invaded during the operation, thus making it much more tedious and inconvenient to both operator and patient in the first instance, and in the second increasing the risk to life to a very great extent.

For a number of years past I have adopted a method which obviates the difficulty of blood running in the larynx and pharynx, and so does away with the necessity of preliminary tracheotomy or

plugging of the posterior nares, and which has proved so efficient in a large number of instances that I feel justified in making public mention of it now that it has been thoroughly tested.

This method is very simple, and consists in placing the patient, after thorough anaesthesia, upon the operating table, in a ventral recumbent position, with the head projecting, face downward, over the edge of the table.

The head is supported in a horizontal position by the hand of an assistant, and by placing a bandage around the forehead, the loose ends of which are secured to a band around the waist of the patient, or better still to a rigid support above the head of the table. In this position the flow of blood occasioned by the operation finds vent through the nostrils and mouth, and none of it finds its way into the larynx.

Of course, the topographical relation of the parts to the position of the patient is an entirely different one from that we are accustomed to in the ordinary upright position, but not much more so than when the patient is in the prone dorsal as lateral position, and with a little practice on the part of the operator this difficulty is soon overcome.

In order to obtain sufficient illumination, an ordinary looking-glass or a concave reflector is placed upon the floor underneath the patient and secured in such a position that it will reflect light from any convenient source, a window or gas-jet, into the nasal cavities. As a rule, in such operations I depend upon the sense of touch rather than upon that of sight, but if it becomes *absolutely* necessary to see any particular portion of the nasal chambers, which *can* be seen during the operation, I adopt the very simple expedient of lying upon my back under the table, which brings me again into the same relation to the patient's nasal cavities that I was in when he was sitting conscious on the examining chair, and thus the topographical relations are restored, under somewhat inconvenient circumstances it is true, to the normal and accustomed one's.

I have performed many of these *major* intranasal operations with the patient in the position described, and have been greatly pleased with not only the freedom of motion which it gives to the operator for his manipulations, but also

with the ease of mind and freedom from anxiety, lest blood should choke the patient in spite of all precautions to prevent such an accident, which have to be instituted in the old method of the dorsal recumbent position, even with the head extending beyond the edge of the table and hanging down.

The Waste of Energy.

Every now and then some fool man writes to the papers to say that we are becoming a weak race; that the standard of height and measure of physical accomplishment are not what they were in the old days—whenever those were. The luxury of modern civilization and the substitution of mechanical for bodily energy are held accountable for this deplorable state of things. Of course it is useless to argue against them. No man who has grown accustomed to *paté de foie gras* is going back to sustain himself on gluten bread while his salary keeps up, and no man is going to pay half a dollar to a workman to fix up his last summer's straw hat in two days when he can have the job done in ten minutes for half the money on an electrical machine.

But everybody must have noticed that with the decrease of occasion for manual labor there is a compensating output of energy in other directions. Man is constitutionally compelled to use his muscles. He has lost the prehensile caudality that adorned his thousand times great-grandfather, because his pursuit of agriculture and small game took him out of the trees and gave him an ampler footing on the ground; but with this rather unimportant exception he is stronger, bigger, and better equipped than the relative with which Mr. Darwin has endowed him.

The fact that he has everything done for him by machinery, except his breathing and a part of his thinking, leaves him with a surplus of bodily vitality.

Why not employ this energy that is now so lavishly wasted? In old aristocratic societies it was against the unwritten law to do anything useful. A man might tire himself to death rowing, fishing, dancing, shooting, playing golf, and doing things like that, but if he sawed wood he was done for. These aristocratic conventions no longer obtain, except among the most gilded of the elect.—*Harper's Weekly*.

ACUTE COCAINE-POISONING.*

M. V. BALL, M. D., PHILADELPHIA.

In presenting this report of a case of acute cocaine-poisoning, I doubt whether I can offer anything new, and yet there are several interesting points to be noted.

The literature on cocaine intoxication, though widely scattered, is, however, quite extensive. Mattison, of Brooklyn, and Germain Sée, of Paris, have each reported, in 1892, two hundred and more cases of poisoning, with twenty deaths. Since then quite a number of deaths have been recorded in medical journals.

The dose at which fatal poisoning has occurred varied within marked limits. In five fatal cases reported by Mannheim the quantity of the alkaloid taken was over 15 grains. In two cases reported by Mattison, death occurred after hypodermic injection of $\frac{3}{4}$ grain.

Symptoms of poisoning have set in when the drug was administered by the stomach, when thrown into urethra, nose, ear, rectum, or when injected under skin or into the gums; or when simply rubbed over the surface of the face.

Absorption is very rapid, and in some of the cases reported the operator barely had time to withdraw the needle of his syringe before symptoms of intoxication set in.

The symptoms described in each case differ greatly, and there are all stages, from slight incoherency in speech with dizziness and dilated pupils, to excited hallucinatory delirium, thready uncountable pulse, convulsive breathing, or sudden collapse, or marked tetanic spasms.

Cocaine-poisoning exhibits the symptoms of strychnine-poisoning in some cases, in others that of alcohol, and in some a mixture of both.

I will describe the case in question:

Mrs. C., aged thirty-five years, white, a sufferer for ten years past from rectal stricture, accustomed to use cocaine locally on pledget of cotton in the rectum,

being tired of her existence resolved to end her life by swallowing 25 c.cm. (6 drachms) of 5 per cent. solution of cocaine, equal to about $1\frac{1}{4}$ grammes ($18\frac{1}{2}$ grains) of the alkaloid.

The dryness in the throat was speedily produced, and in attempting to get up from her couch to ring for the servant she felt dizzy and fell to the floor. A young medical student, living in the house, and summoned at once, found her in a raging delirium. She wanted to throw herself from the balcony. She talked loudly, incessantly and incoherently. She was restrained by physical means, and when the student endeavored to give her a hypodermic of morphine, she resisted, and would not allow him to do so; he persuaded her to take the tablets by the mouth, and so $\frac{1}{2}$ grain was administered. It was about half an hour after that I saw the patient. She was held down on the bed by her friends, and was gesticulating wildly, yet was able to recognize me as soon as I entered the room, appealing to me for help. I suffered her to be released, when immediately rushing past me she made for the open window to fling herself out. This she was prevented from doing, remarking, as she was led back to her couch, that after all "she wanted to look pretty when she died."

Her pupils were widely dilated, the pulse hardly perceptible and very frequent. The tongue would be protruded spasmodically, and teeth gritted together in a tetanoid manner. She talked incessantly. In a few minutes I was able to gain control over her without using physical restraint; and, though she talked irrationally at times, her delirium was less marked, and she told me that she was not going to get over the effects, nor would she allow me to give her an antidote; in the next breath she would ask me to listen to her singing or recitation. Frequently looking at her hands they appeared dirty to her, and she would rub them. Her tongue was

*Read before Philadelphia County Medical Society, October 9, 1895.

much congested, bluish anæsthetic. Her throat was very dry; other parts of the body tested superficially gave no indication of anæsthesia.

Respirations were normal. Temperature normal. Pulse, when counted, was 140. She stated that she felt glorious, never so happy before. Wanted to drink champagne, and when it was brought to her, forgot that she asked for it. Delusions of persecutions were present to a slight degree, and her most intimate friend was accused of treachery and underhandedness. She was desirous of moving around, wanted to leave the house and visit a place she had not thought of for many years. Gradually a feeling of tiredness supervened, talk became less lively, bodily sensations were now complained of, and especially great thirst, which water or ice had no power to quench. Lemon and vinegar applied to lips was tasted, showing that sense of taste was not entirely absent.

Pulse still very frequent and small. Was able to administer black coffee and lukewarm water, and thus induce free emesis. At this time, which was two hours after the cocaine had been swallowed, the patient was resting quietly, with her pulse stronger, but still rapid. Thirst was extreme, and in attempting to go to bath-room, she found her legs almost useless. The urine was passed. Strychnine, grain $\frac{1}{16}$, was administered by mouth, and some champagne was given. Perspiration started on skin, and the former pallid condition of face changed to a slight glow. Four hours after the initial onset the patient was sleeping soundly, and the pulse went down to 100, but was much stronger. Consciousness entirely returned, but no recollection of time, and little of previous events, although she remembered when I came in. Next morning she was very weak, her body felt bruised, and her limbs heavy and almost useless. Feces and urine had been passed without trouble. No appetite. Tongue and throat still much parched, and thirst still present. Congestion of tongue was gone, and normal sensations had returned.

A history of a previous overdose was obtained. The alkaloid in dry state was taken by mistake, and an active deli-

rium much worse than the one just recorded occurred. Morphine was administered in large quantities at the time.

Very few cases are on record of recovery from so large a dose as the one taken in this case, although in a case where 22 grains were given by mistake by the mouth, patient died almost immediately. Forty grains have been taken daily by persons habituated to its use. Recovery would probably not have occurred were it not that patient was under the influence of the drug more or less for some time past.

One of the earliest, possibly the first, case of cocaine-poisoning is recorded by H. Ploss, in the *Zeitschrift für Medicin, Chirurgie und Geburtshilfe*, vol. ii., 1863.

Nieman, who was the first to isolate the alkaloid and gave it the name it now bears, made known his discovery in 1859, but this fact was known to a certain apothecary, who was experimenting with cocoa leaves, and who, in 1863, thought he obtained a poison from them as fatal in its effects as strychnine. He took of this extract a considerable quantity with a view of ending his earthly existence, and while waiting for the drug to take effect, he joined some friends in a beer hall and indulged in a few mugs of beer; he then retired to his bed and fell into sleep. Some three and a half hours after he took the poison he awakened with severe thirst and dryness in mouth, dizziness in head, and in attempting to walk across the room his legs gave way. He was unconscious then of what occurred until the morning, but from the appearance of his room, he must have been rather active. In the morning he felt very weak, and still dry in mouth, and thirst.

In the cases of poisoning that I have been able to collect, frequency of pulse, dilatation of pupils, convulsive twitchings of face and general convulsions, respiratory muscle spasm, unconsciousness, excited delirium, suppression of urine, and cyanosis are the symptoms most common.

The delirium is to be distinguished from alcoholic delirium from the absence of frightful hallucinations. Hallucinations are rarely present. One, the so-called cocaine-bug, and which occurred in my patient, is believed by Erlenmeyer to be due to disseminated scotoma.

Spots of dirt are seen on white surfaces, as noted in this patient, the fingers seemed black and dirty.

LeGrain states that the alcoholic tremor is wanting, but it was distinctly present in our case. The thirst and dryness of throat is a distinguishing feature. Otherwise, without a history, they seem very much alike.

Moreno Y. Maiz (*Recherches Chimique et Physiologique sur l. Erythroxyton Coca*, 1868) states that the thoughts are not mixed up as in alcoholic intoxication. The phantasms are brilliant; there is a flow of wit. I have seen in an advanced case of general paresis a similar delirium—a desire to sing and recite, to move about, to express a feeling of happiness. An habitue of cocaine has expressed himself as desiring ten years with cocaine rather than 10,000 centuries without it. The element of grandeur and personal aggrandizement sometimes enters.

Dujardin-Beaumetz, in his *Dictionnaire de Therapeutique Supplement*, 1895, states that the effects of cocaine in toxic doses in warm-blooded animals are similar to strychnine, but in cold-blood animals—the frog, for instance—no convulsions are produced.

It is a curare for the sensitive nerves, exciting the nerve trunks, and rendering the peripheral nerves analgesic.

Francois (*Arch. de Physiologie*, 1892, p. 562) finds it a paralyzing poison, not only on the sensitive fibres but also on the motor, and on the fibres of muscles as well as the protoplasm of cells.

The frequency of pulse is probably due to paralysis of the vagus; the phrenic nerve is likewise interfered with, causing the respiratory spasms and tetanic arrest in some cases.

In my case there was no interference with the urine. The urine is often suppressed; other secretions, as those of the mammary and sub-maxillary gland, have been noted as likewise affected by toxic doses.

Maurel thinks that death is due to destruction of leucocytes. Their dead bodies collecting in capillaries and forming embolic processes.

Reclus holds that thrombi form in veins, and when death occurs after an injection under the skin it is due to the penetration of a small vein.

This will hardly account for the deaths happening after the drug has been thrown into the urethra or when swallowed by the mouth.

As to treatment, I cannot offer anything suggestive. Morphine has been looked upon as antagonistic, and has been given in the majority of cases recorded where symptoms of collapse are present early, with tetanic convulsions and cyanosis. Nitrate of amyl is indicated.

Where heart's action is weak, stimulants, strychnine, hypodermatically, alcohol, ammonia, and ether have all been suggested and tried.

The early administration of $\frac{1}{4}$ grain morphine did probably influence the course in the case described, but recovery is often rapid without any treatment.

As the poison is eliminated rapidly by the urine and skin, the free action of these organs is desirable, especially as there is a tendency for them to be less active than usual.

While the dosage of cocaine cannot be said to have any well-defined limits, several clinicians, among them Hänel and Decker, believe that $\frac{1}{4}$ grain, hypodermatically, should be the maximum dose.

Abortion; Decidua Vera Intact.

Gottschalk (*Centralbl. f. Gynak.* No. 25, 1895) showed at the May meeting of the Berlin Obstetrical Society a second month's ovum spontaneously delivered with the decidua vera intact. The abortion followed a prolonged railway journey. The membranes assumed the form of the uterine cavity, including the cervix. It could plainly be seen, however, on examining the decidua vera, that the membrane in question ceased inferiorly at the level of the internal os. Keilmann was in error when he made out that the vera lined the canal of the cervix. The vera in Gottschalk's case certainly assumed the form of the cervix, but that was owing to a hæmorrhage in the foetal membranes inferiorly, which caused them to bulge down as far as the os externum. The blood on clotting made a perfect cast of the cervical canal. The decidua vera, though shed entire, showed diffuse hæmorrhages all over its substance.

CHYLURIA.*

F. P. HENRY, M.D., PHILADELPHIA.

I am indebted to Dr. Charles W. Coburn for this specimen of chylous urine, which I have the honor to present to the Society. The patient who voided it is a Cuban, aged forty-five years, from whom thus far but a meagre clinical history has been obtained. He has passed urine, such as is contained in this bottle, for the past two months and uninterruptedly; that is to say, that at no time during the period mentioned has the urine presented a normal appearance. Although his appetite is good, he has lost twenty pounds during the last three months. These are about the only facts that I have been able to elicit concerning the man's present and previous condition.

You observe that the urine is absolutely opaque, and bears a sufficient resemblance to milk to render the term "galacturia," sometimes applied to such specimens, eminently appropriate. It has, however, a slightly pinkish tint, caused by the presence of a few blood corpuscles, and at the bottom of the bottle there are several pink coagula. A surgeon, to whom I showed the specimen this morning, took it for a solution of creolin, and it certainly resembles it very closely. The clots to which I have just referred must, I think, have been formed in the urine after its discharge, for there is no history of attacks of dysuria, such as might be expected to be caused by them, had they traversed the urethra.

As is well known, chyluria is generally associated with the presence of the *filaria sanguinis* in the blood, and this parasite has also been found in the altered urine. In fact, it was first detected in chylous urine by Wucherer, and, later, by Lewis in the blood of patients affected with chyluria. The animals discovered by these observers were minute nematode worms, about 0.3 mm. in length. They were subsequently ascertained to be the embryos of a much

larger parasite, which was first detected by Bancroft. This adult animal is from 8 to 10 c.cm. long, and has been found in lymphatic abscesses, lymphatic glandular swelling, lymph-scrotum, etc. A most valuable addition was made to the life history of the parasite by Dr. Patrick Manson, of Amoy, China, who proved that the mosquito plays the part of an intermediary in conveying it from man to man. In the first place, Manson discovered that the embryonic filariæ are detected with comparative ease in the blood of a patient who harbors them, provided such blood is withdrawn from the vessels of the surface during the night. At night the embryos swarm to the surface, while during the day they retire to the deeper vessels. Acting upon this knowledge, Manson exposed a patient affected with filariasis to the bites of mosquitoes and found the embryos in the bodies of these insects.

The mosquitoes, with the embryonic filariæ in their interior, seek water in which to deposit their eggs. This function accomplished, they perish; the embryonic filariæ are liberated, and through the medium of the water gain access to the human system. It is through the plugging of lymph vessels, especially those connected with the urinary tract, that the lymph gains access to the urine. Post-mortem examination of those who have died from filariasis has revealed enormous distention of the thoracic duct and of the renal lymphatic vessels. In one case, that of Havelburg, there was found in the left hypogastric region a large sac with chylous contents, which communicated with the bladder.

There is, undoubtedly, a non-parasitic form of chyluria, caused by lymphatic obstruction from tumors or other causes interfering with the circulation of lymph. The commonest cause of such interference, however, is the parasite in question.

It is only fair to add that there are those who deny that the milky appear-

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ance of the urine in cases of chyluria is due to its admixture with lymph. The arguments in favor of this view are the following: In the first place, chylous urine does not contain sugar, which is a constant ingredient of lymph. Secondly, the quantity of fat in chylous urine is much greater than that contained in lymph; whereas, if derived from the latter source, it should be much less, since the urine normally is free from fat.

I have been unable to detect the filaria in this specimen. As regards the blood of the patient from whom it was obtained, I have thus far seen but one specimen, and it also was destitute of filariæ. The absence of the parasite cannot, however, be regarded as certain until after repeated and futile examinations of the blood. These, it is scarcely necessary to say, should be made at night—i. e., at the time when the parasite comes to the surface.

Dr. Leffmann very kindly examined this specimen chemically, and, although he has not completed his study of it, I have his permission to announce the following results of his analysis:

The high speed centrifugal machine did not separate the fat. The latter was extracted by ether, and the ethereal solution on evaporation left a greasy deposit.

Trommer's test and the phenyl-hydrazine test gave no definite sugar reaction. Treating with a little acetic acid and heating in water-bath caused all suspended matter to collect in such a way as to permit of complete filtration. The filtered liquid was pale yellow, and perfectly clear. It was to the latter that the sugar-tests were applied. It is probable, from the readiness with which the suspended fat is entangled on heating with acetic acid, that a coagulable proteid is present.

COMMUNICATIONS.

LIFE INSURANCE.*

DANIEL JORDAN, ESQ., NEW BRUNSWICK.

The plan I propose to adopt will be, in the first place, to endeavor to show what life insurance has been held by the authorities to be; what are its principles; the risk insured, and the effect of concealment and misrepresentation in applications for such insurance. In connection with these branches, as relating strictly to life insurance, I will briefly consider the question of insurance against accidents, as far as the proximate and remote causes of death are concerned, and omit entirely all such questions as the interest of an insurer in the life of the insured; who has authority to effect this insurance; and the consequences of mistakes in these respects, all of which are matters of the greatest importance, when considering the general

subject of life insurance, and require to be most carefully attended to, as well by persons effecting insurance as by the company insuring, and would of themselves afford more than ample material for a single paper on the subject.

Before entering upon the consideration of the subject, however, I intend viewing the questions as they have been decided by the English courts and jurists rather than by the jurists and courts of the United States, for the simple reason that I am more familiar with the former decisions than I am with the latter, and not because they are any better or higher authority for a legal standpoint. Indeed it may be, and no doubt is, the case, that many, if not all, of these questions have been decided in a similar way by the courts in both countries.

*Read before the Medico-Legal Society, February 12, 1895.—*Med. Examiner*, April 1895.

Life insurance has been defined by Baron Parke, one of the most eminent of English jurists, to be "a mere contract to pay a certain sum of money on the death of a person, in consideration of the payment of a certain premium (or annuity as he calls it) for his life, the amount of the premium being calculated in the first instance according to the probable duration of the life, and when once fixed it is constant and invariable. The stipulated amount of the premium is to be uniformly paid on the one side, and the sum to be paid in the event of the death is always (except where bonuses have been given by prosperous offices) the same on the other.

Concise as this definition is, and it is the most simple and clearest I have been able to discover in the English authorities, and is the one most generally cited in our text-books on this subject, yet I was very strongly impressed with, and, I will admit, rather prefer that given by a learned and able American jurist, Mr. Justice Gray, of the Supreme Court of Massachusetts, which is as follows: "A contract of insurance is an agreement by which one party for a consideration (which is usually paid in money, either in one sum or at different times during the continuance of the risk) promises to make a certain payment of money upon the destruction or injury of something in which the other party has an interest. In fire insurance and marine insurance the thing injured is property; in life or accident insurance it is the life or health of a person. In either case neither the times and amounts of payments by the assured, nor the modes of estimating or securing the payment of the sum to be paid by the insurers affect the question whether the agreement between them is a contract of insurance. All that is requisite to institute such a contract is the payment of the consideration by the one and the promise of the other to pay the amount of the insurance upon the happening of injury to the subject by a contingency contemplated in the contract." Now while I say I prefer this definition to the one previously quoted, still I must express the opinion that the concluding portion thereof in which Judge Gray says "all that is requisite to constitute such a contract is the payment of the consideration by the one,

and the promise of the other to pay the amount of insurance, etc.," is, in my opinion, rather inconsiderately expressed, and might indeed be very misleading, unless the whole clause is governed by the latter portion, in which he says "upon the happening of injury . . . by a contingency contemplated in the contract," and unless we are to infer from that expression that he implies the existence of that most indispensable ingredient in all contracts, and, if possible, more particularly in contracts of life insurance the *uberrimoe fidei* spoken of by all writers on this subject. For it is a proposition of law in connection with the subject that has been too well established by almost innumerable authorities to be successfully controverted for a single moment, that where this "utmost good faith" is wanting, or any material concealment or suppression of material facts exists, or an intention to deceive or misrepresent is shown to have occurred in applications for life insurance, that policies thus obtained will be declared void, and such will be the inevitable irrespective of the length of time the premiums may have been regularly paid by the insured and regularly accepted by the company, unless, of course, the latter has permitted such payments to be made and has received them, having the knowledge of such concealment, etc. Should such be the case, the company would have stopped itself from afterward setting up such fact as a defense to an action on its policy, and such acts would amount in law to a waiver by the company, for it would then be seeking to take advantage of its own wrong, which the law will not permit.

It might be as well here, and in connection with what I have just stated, to diverge a little from the precise course I have laid out, and examine for a few moments some of the cases bearing upon the questions of "Representations" and "Declarations," to see how extremely particular the courts are and always have been as to the *bona fides* requisite in contracts of this description. A proposal was made in one case to a company by a person for insurance upon his life, and the following questions, *inter alia*, were asked him: "Has a proposal ever been made on your life at any

other office or offices? If so, when? Was it accepted at the ordinary premium, or at an increased premium, or declined?" The assured answered, "Insured now in two offices for £16,000 at the ordinary rates. Policies effected last year." These answers were true, but the assured had failed to inform the company of the fact that his application had been refused by other offices, and although this company had accepted his proposal and had not, until sometime afterward, ascertained that the life of the assured had been declined by these other companies, the Court of Chancery Division held there had been a material concealment by the assured in not stating the fact of such previous refusals, and that the company was entitled to have the contract set aside. So particular are the courts on this subject, they will not leave it to the applicants for life insurance themselves to determine whether or not the fact or facts that have been concealed or misrepresented is or are material and necessary to be made known to the company, but they have declared that such facts must be disclosed to the company, as they are entitled to know everything that may govern them in accepting or declining any risk. And where the suppression or false representation of facts is made, or occurs in answer to parol inquiries only, where the policy in its terms is declared to be void, should false answers be given to *written inquiries*, yet the assured cannot, under the pretense that he was not aware that such proviso extended to other than such latter inquiries, shield himself from answering truly all inquiries made of him by the company. Indeed it is not necessary to establish a false representation to show that the same was actually spoken or written, but, as stated by Malins, Vice-Chancellor, "in order to tell a falsehood it is not always necessary to use express words; it may be done by implication." In that case a similar question had been asked by the company as to whether there had been any previous refusal of the party's life by any company, and, if so, to name the office. There had, in fact, been such refusals, but negotiations were then pending with other offices, which, after the application to this company, had also resulted in refusals. The

agent, through whom this party was seeking insurance with the company, wrote to the company stating he had been and was then corresponding with other offices in reference to this insurance, as the amount to be insured was very large, but he withheld from the company the fact that there had already been refusals in other offices and notwithstanding the company had granted the policy, the court decided that there had been such an intentional concealment of facts that the policy so granted was void. Courts have again gone still further and have decided it is not even necessary that the fact stated should have been untrue to the knowledge of the person applying for this insurance. Such was the decision of the Queen's Bench in the case of *Macdonald vs. The Law Union Fire and Life Insurance Company*, reported in *Law Reports, 9 Queen's Bench 328*. In this instance the plaintiff had effected an insurance with the defendants upon the life of a third party, to which policy the plaintiff himself was not a party. This policy contained a promise "that if the declaration under the hand of the assured delivered at the company's office as the basis, George III C. 48, S. 3, which enacts "that no greater sum shall be recovered from the insurers than the amount or value of the insured in such life," refers to the interest at the time of making the policy and not at the time of the insured's death.

There is another branch of this subject somewhat connected with that of "Representation," to which I would like to refer for a short time, as it is one in which the medical members of the society are more particularly concerned in a professional way than are the legal members; it is in reference to the granting or signing certificates of health or medical examinations of applicants for life insurance. Some medical practitioners appear to be of the opinion that if they can state that such applicant is in what is called "good health" at the time he seeks insurance, that that is all that is required, and all the insurers need to know, and that it does not make any difference what may have been the state of his health previous to that time, or what his habits may have been. Let me here endeavor to disabuse their minds of such an erroneous idea, and

state to them that such is not all the law requires by any means, but it is much more particular in its requirements in this respect, and it becomes a matter of the greatest importance and moment, both to the practitioner himself, in a professional point of view, and to the applicant from a pecuniary standpoint, that a much more particular examination of such applicants should be held, and the results thereof all fully and unequivocally stated in these certificates or reports. It is important to the practitioner, as the repetition of such improper conduct must result in the loss of confidence, which must mean to him professional death; and to the insured or his representatives, it means pecuniary loss, as the provision which was sought to be thereby made may be entirely cut off, and the objects of his intended bounty may be wholly deprived of the benefits that should have been derived from his forethought in insuring. It is true that in a great many cases the medical examiner, for the first time in his professional practice, examines such applicants when they are referred to him by the insurance office with whom they seek to insure, and consequently in a greater or lesser degree they must be governed very largely, in the report they subsequently made to the office, by the answers given and representations then made to them by these persons; but would it not be wise for any and all such practitioners to decline at once to undertake the responsibility of such examination and reporting thereupon, without having had a previous consultation with the regular medical attendant of such applicant? The objection that might be raised to this proposition, and which seems to me would fairly be raised, would be, why should the regular medical attendant be called upon by a company to consult (or report, I might almost say, for on his opinion the report of the company's examiner, whether favorable or unfavorable to the applicant, would no doubt largely depend) without some compensation or fee from those asking his services. Why should he run the risk of divulging professional secrets which might injure the reputation of, and lose to the practitioner it may be, a responsible and wealthy patient, and which report

might or might not be acted upon by the insurance company afterward as suited their own convenience and affected their coffers. Still for all this, would it not be better for such applicants themselves and their families after them, if something such as I have suggested were done, for there might be cases where the medical examiner, through insufficient instructions from the office, or from oversight or thoughtlessness on his part, would neglect to examine such applicants as to all previous conditions of their health and habits, and the applicants themselves, through inadvertence or want of knowledge, might neglect or fail to disclose some most material fact, thinking it either unnecessary or too insignificant to mention even if it occurred to him at all, yet, who would be most thankful to his own attendant for having done so had he been referred to in the matter. I will repeat then, in order to emphasize more fully what I have already said, that the state of health of an applicant at the time of such examination only, does not always represent the whole risk insured by an office, for there are many cases where restoration, or rather apparent restoration, to health may only be of a most temporary character, to be speedily followed not only by serious and confirmed disease, but even indeed by death itself; and therefore the insurers are entitled to be informed most fully and unreservedly of everything relating to the previous, as well as to the present condition of each applicant's health, and this has been decided time and time again by the courts, both in England and America. The disease under which the party may have labored, or from which he may have suffered, may have been apparently the most trivial in its character, and not appeared at all likely to affect the risk, yet when we remember how the courts have decided, as mentioned in an earlier part of this paper, that it is not for the assured to judge and determine what is necessary to be disclosed, how very significant and important the most trivial and unimportant fact may become, when placed under the microscope of judicial investigation and inquiry, and such facts are always to be left to a jury to decide upon, and

in this inquiry they are to be guided not only by the medical opinions, but by their own common sense as well.

Having now introduced the subject of life insurance and showed the light in which it is viewed as regards its character as a contract, let us pass on to the consideration of some points connected with it, and which appear to be particularly relevant to the subject as we are dealing with it; and for convenience sake I will endeavor to do so in the following order, treating at times two or more of the branches together whenever it would appear more advisable to do so. The order I propose is the following:

1. Diseases tending to shorten life.
2. Capital punishment and suicide.
3. The state of mind of assured.
4. Secondary causes.
5. "Sole cause of death."
6. Habits.
7. Under influence of liquor at time of injury.
8. Fits.
9. Some general remarks.

The first of these divisions is, I think, quite intimately connected with the subject already mentioned as to the state of health of the assured at the time of his application for insurance, and as referred to in the passages on Representations and Declarations, also in my remarks on the duties of the medical examiner, and sufficiently so, I think, to justify me in next proceeding to consider it. It is not possible to annunciate any general rules for determining what diseases have, and what have not this tendency, as any variation or deviation from health might be so interpreted if a strict construction were to be put upon the terms, and who is there in fact, who has not the seeds of disease of some kind planted in his body, and which are there germinating and growing, and have been so ripening since the hour of his birth? The law, however, does not place this strict construction upon these words, but has placed a proper and reasonable representation upon their meaning, and considers them to apply to such diseases only as are in themselves regarded as of a serious nature, and, as a rule, whose tendency is to affect directly or indirectly the duration of a person's life who is affected with them. Again, it is not to be concluded

that a disorder with which a person may be afflicted at the time of or before he effects an insurance on his life, "is a disorder tending to shorten life within the terms of some policies, from the mere fact that it eventually causes his death; if it be not a disorder of such a character as generally has such a tendency, for all disorders have such a tendency in a greater or less degree, and even sometimes the apparently most trifling, still if the general effect of such disorder is not to shorten human life, the mere fact of the applicant having been troubled therewith either before or at the time of his insuring, will not defect the policy, and the company will not be relieved from payment in the event of his death arising from such disorder. This point has been so determined. The judge (Chambre) charging the jury in this case said: "All disorders have more or less a tendency to shorten life, even the most trifling; as, for instance, corns may end in mortification; but that is not the meaning of the clause. If dyspepsia (which was the disorder with which the insured in this case was affected) were a disorder tending to shorten life within this exception, the lives of half the members of the profession of the law would be uninsurable." The courts will always place an equitable interpretation on such terms as these, for the insurers have no right to give a forced or strained construction to the words in their policies, or such as will give them an advantage of what must be regarded only as an accidental result, and which does not generally follow as a necessary consequence.

I will now come to the branch announced as "capital punishment," but which is included in policies, as a general rule, under the terms, "death by the hands of justice." In connection with this I will also consider the question of "suicide," or "death by his own hands." The first of these points came up for discussion before the House of Lords. There it appeared that a man had insured his life and had paid the premiums regularly for a number of years. After so doing he committed a felony, for which he was tried and executed. His representatives sought to recover the amount of the insurance on

his life from the company, and the Master of the Rolls, who had heard the case, declared in favor of their claim. The case, however, went up on appeal to the House of Lords, and the decision of the Master of the Rolls was reversed, on the ground that by the general policy of the law the policy became void in consequence of the assured's death being occasioned by his own criminal act. On this appeal the case was considered first with reference to public policy and then as a contract between man and man. As to the first point it was argued (and the judgment of the court subsequently almost followed the argument in its very terms) that suppose it had been expressly stipulated in terms that in case the assured should be executed for felony the money should be payable, would the policy of the law allow this to be effectual? Is it possible that a claim in right of a party effecting such an insurance could be maintained, or that the insurance should not be void as affording encouragement to crime, and being contrary to public policy? If such a policy could not be sustained where a risk of that kind was mentioned in direct terms and language, how could effect be given to a policy if it in reality involves that condition? The court decided that this policy was avoided, not by the felonious act, but by the probable consequences, and it was said that when the party committed the felony he had no intention of being hanged for it. It would indeed be difficult to prove that he had, but he had effected insurance upon his own life, which life ceased in consequence of his own wilful violation of the law, and it would be against the general policy of the law as well as established principles that either the insured or those claiming in his right should receive for a loss occasioned by the criminal act of the insured himself. The same result would follow in a case of an insured who committed suicide, and as insurance is a contract in which the insurer, in consideration of a premium equivalent to the risk to be run, undertakes either against probable perils and losses or against a certain event, as in case of death, but uncertain as to the period of its taking place; if the insured, therefore, could at any time, by his own act, determine the event, it is

against the essence of the contract, and much more is it so if that act, as in cases of capital punishment inflicted for the commission of an offense be felonious, and which the law always considers wilful. In juxtaposition with this branch arises that of "suicide," or "death by his own hands," which expressions have been decided to mean one and the same thing, and as it is in some measure governed by similar principles as that of capital punishment, I will consider it now in its due order. In this branch, however, of our subject will arise the additional point, as to whether at the time of the suicide or self-killing, the assured was responsible or not for his act. The authorities are somewhat at conflict in reference to this, but I think the weight of authority, particularly the more recent cases, will be found to be against the validity of claims made or policies where the assured has committed the act of suicide. A case was decided in 1847 where a party had insured his life by a policy, subject, *inter alia*, to the condition "that in case the assured should die by his own hands" the policy should be void. The insured afterward threw himself into the Thames and was drowned. In this action the jury by their verdict found that the assured "had voluntarily thrown himself into the river, intending to destroy his life, but that at the time of his committing the act he was not capable of judging between right and wrong." Upon this finding the court subsequently held that this was such a "dying by his own hands" as discharged the company from liability under its policy. The finding of the jury, it will be seen, amounted in terms to a finding that the insured was not insane when he committed the act, and the chief justice, in his judgment remarked that if he was insane the company was responsible, and COLTMAN, justice, said, "the finding of the jury implies that the insured was under no uncontrollable influence; that he had power to do the act or abstain from it." There has been considerable discussion over this case, particularly as to the effect of the finding of the jury, for if the insured voluntarily threw himself into the river, intending to destroy his life, as the jury found, then it must be assumed that he was in a condition to

judge and knew what he was doing and what the consequences of his act would be, otherwise it could not have been a voluntary act with a definite intention; if, on the other hand, as the jury say, "he was not capable of judging between right and wrong," then there could not, as far as any intention was concerned, have been a self-killing, which would amount in law to suicide or self-murder, which, in the absence of intent, cannot amount to crime, for a *felo de se*, or felon of himself, is a person who, being of sound mind, and of the age of discretion, voluntarily killeth himself. It is not every melancholy or hypochondrical distemper that denominates a man *non compos*, for there are few who commit this offense, but are under such infirmities; but it must be such an alienation of mind that renders them to be madmen, or frantic, or destitute of the use of reason. The act itself when committed is, according to the expression itself, *felo de se*, a felony, and the attempt to commit it remains, as at common law, a misdemeanor, and to constitute the commission of the act a felony in one case, and the attempt to commit it a misdemeanor in the other, there must be the criminal intent. The case to which I referred on this point was *Dormay vs. Borradaile*, 5 Common Bench Reports, 380. Following this case was another before Vice-Chancellor Wood, in which, after considering all the cases up to that period bearing upon this point, he says: "It appears to me clear that where there is no express provision in the policy, that in the event of the insured dying by his own hands the policy shall become void, that policy is not vacated by the circumstance of the assured having died by his own hand while in a state of temporary insanity. In the cases which have arisen in regard to policies of insurance where there has been no express contract that payment shall not be made if the insured die by his own hands or commit suicide, the question has been whether suicide committed while the insured was in a state of mental derangement was or was not an event which was provided for by the policy. There is nothing irrational in a company saying 'we will effect the insurance, but we regard the possible case of insanity as one that may occur more

frequently than the ordinary risks which we are willing to incur, therefore we will guard ourselves against the loss which is likely to be caused by insanity.' There is 'nothing irrational or unreasonable, that is to say, morally irrational or unreasonable, in such a contract on the part of the company, and accordingly it is obvious that the stipulation is always express, that if the insured destroy himself, the event has occurred in which the company say they will not be bound, and they are accordingly not bound.'" When another policy contained the condition "that every policy effected by a person on his or her own life shall be void if such person should commit suicide," the Court of Exchequer Chamber has decided that where under such a policy the insured died in consequence of having voluntarily and for the purpose of killing himself, taken sulphuric acid, but under circumstances tending to show that he was at the time of unsound mind, that the terms of the condition included all acts of voluntary self-destruction, and therefore that if the insured voluntarily killed himself, it was immaterial whether he was or was not, at the time, a responsible moral agent. This case was followed in *Dufour vs. The Professional Life Assurance Co.*, 25 Beaven, at page 602, where the Master of the Rolls said: "I cannot distinguish this case from *Cleft vs. Schwabe*, where it was held in the Exchequer Chamber that the moral condition of mind was not material in such cases." I think it also quite clear that the words "commit suicide" are not distinguishable from "perish by his own hand." These cases, and the questions decided by them, will include the third point I have mentioned in a previous part of this paper, namely, "the state of mind of assured," a question which from its very nature shows that it relates to sanity or insanity of the party, and which question could only be raised in connection with the subject of suicide already dealt with.

We now pass on to the two following clauses, which it is apparent are almost solely connected with accident insurance, for there can hardly be any such question raised upon a policy of life insurance as such, where, whether death results from immediate and proximate causes, or remote and secondary causes,

cannot by any possibility make any difference, provided, of course, the proximate cause of death is not the consequence of a secondary cause such as the wilful illegal act of the assured for which he suffers the penalty of capital punishment, and this question has been already pretty fully, I think, discussed, but what is meant here by the expression, "secondary causes," will fully appear from the cases we will now consider.

Suppose, for instance, a person effected insurance with a company against accidental injury, and by the terms of the policy the company agreed to pay the amount insured to the assured's representatives should he meet or sustain "any personal injury caused by accidental, external and visible means," and the direct effect of such injury should occasion his death, and suppose such policy also contained a proviso that this insurance should not extend "to any injury caused by or arising from natural disease or weakness or exhaustion consequent upon disease," and during the time such policy was in force, the assured was crossing or fording a stream and was seized with an epileptic fit and fell into the stream, and was there drowned while suffering from and in such fit, but in the fall he did not sustain any personal injury to occasion his death other than the drowning, this would be a case of "secondary cause," and the question to decide would be, What was the cause of the assured's death, or, in other words, was it accidental, and this within the terms of the policy, or was it natural, and consequently, not within such terms? I might here remark that all the authorities show that if there is any ambiguity in the language of the policy, it being the language of the company, it is to be taken most strongly against the company which used it; but here I do not think there is any such ambiguity, but that the words of the proviso mean exactly what they say, and that they point an injury caused by natural disease, as if, for instance, in the case stated, epilepsy had really been the cause of the death, but it was not, however; the death occurred by drowning. The law cannot look to the causes of causes, but to the proximate cause itself,

and the maxim of Lord Bacon is clearly applicable to this case and all cases of a similar character, and it is this: "It were infinite for the law to consider the causes of causes, and their impulsions one of another, therefore it contenteth itself with the immediate cause." The above principle of law which I have announced was decided by the Court of Queen's Bench Division in the case of *Winspear vs. The Accident Ins. Co.*, *Law Reports*, 6 *Queen's Bench Division*, 42; and a similar doctrine was held in *Reynolds vs. Accidental Ins. Co.*, 22 *Law Times*, *New Series*, 829, and also in *Lawrence vs. The Accident Ins. Co.*, *Law Reports* 7, *Queen's Bench Division*, 216.

This last case was in a policy against death from accidental injury and which contained the following condition: "This policy insures payment only in case of injuries accidentally occurring from material and external causes operating upon the person of the insured, but it does not insure a case of death arising from fits, or any disease whatsoever arising before or at the time or following such accidental injury, whether consequent upon such accidental injury or not and whether causing such death directly or jointly with such accidental injury." The insured in this case was standing at a railroad station and while there was seized with a fit and fell forward off the platform of the station across the railway track, when an engine and carriages, which were passing, went over his body and killed him, the question was whether the death of the insured was caused by an accident within the meaning of the policy, and the court held it was, and that the company was liable. I think it will be excusable if I give at some length some of the remarks made by Mr. Justice Denman in this case, as they have a strong bearing upon cases of this nature. He says in his judgment:

"The question is whether the fit was one of the several events which brought about the accident in the sense that it caused the accident to happen by causing the assured to be there (on the track) or whether it was within the meaning of the proviso, a cause of death which would prevent the policy applying to the case. I think we are bound to hold that the death arose from the en-

gine destroying the insured by running across him, and not from the previous fact of a fit having attacked him, and so brought him there. According to the true principle of law as laid down by Lord Bacon, we must look at only the immediate and proximate cause of death, and it seems to me to be impracticable to go back to cause upon cause, which would lead us back ultimately to the birth of the person, for if he had never been born the accident would not have happened. Now, if the argument of defendant's be a good one, this absurdity would follow. Supposing a man were out in the field following sport, and he were to be seized with a fit, either a fainting fit, or an epileptic fit, or any other fit, and had retired to one side of the field and remained there recovering from the fit, and being there a sportsman, not knowing he was there, accidentally shot him, it might be said in the same manner that the cause of death was from a fit. It seems to me only to require to be stated to show the entire absurdity of it. The only difference between this supposed case and this one is the time that intervened between the fit and the person being placed within the influence of the secondary accident, which in this case was very short: but I fail to see a point of reason that there is any difference between one hour, or one minute, or one day—the break in the chain of causes seems to be equally complete."

As to our next branch of the subject, "Habits," this more properly belongs to that in which I spoke of certificates of medical examiners, or under the heading of "Declarations," and as the subject with which this branch is thus connected has been mentioned fully enough to show what is required to be stated in applications for insurance of this kind, I would merely add that a person's habits may be such as to produce irreparable harm but it may be slow and remote injury to health, and thus have a direct tendency to shorten life. The concealment of such facts will be just as fatal to a policy of insurance as the concealment of a serious and deeply rooted disease, and although inquiries may not be directly and expressly made in the shape of questions put by the office, yet the law will in fairness and equity hold

that the company was entitled to be made acquainted with these circumstances which might reasonably affect the risk they have incurred. The case of *Von Sindeman vs. Desborough*, which I have already cited, is an authority which has long been recognized and acted upon by the courts on this point; here may properly follow the point I have mentioned as to an insured person being under the influence of liquor at the time he receives injuries. I do not intend to speak of the use, or rather the abuse of liquor as a habit, which it most unfortunately is, both in our country as well as in the United States, and has, I may here remark particularly, been the remote cause and in many instances the direct and sole cause of more litigation in cases of life insurance than anything else that can be imagined. However, these remarks are beside the question; but in reference to this point it is not necessary that the assured should be actually under the influence of intoxicating liquor at the time of his death to relieve a company from liability under such a condition. If he had been under such influence at the time he met with the accident which subsequently resulted in death that is sufficient. Such was the decision in *Muir vs. Railway Passenger Assurance Company*, 37, Law Times, 356, and the court in this case stated "That the expression, 'under the influence of intoxicating liquor,' meant such influence as to disturb the quiet, equable exercise of a man's intellectual faculties."

We will not extend these remarks, except to cite one case on the eighth ground—"Fits," in which there was a policy containing a warranty that the assured had not been afflicted with, nor was he subject to gout, vertigo, fits, etc., and it was decided that such warranty was not broken by the fact that the assured had an epileptic fit in consequence of an accident, and that is necessary in order to vacate such a policy to show that the constitution of the assured was naturally liable to fits, or by accident or otherwise had become so liable. Lord Abinger, Chief Baron, said: "The interpretation I put on a clause of this kind is, not that the party never accidentally had a fit, but that he was not, at the time the insurance was

made, a person habitually or constitutionally afflicted with fits—a person liable to fits from some peculiarity of temperament, either natural or contracted for some cause or other during life," and in this interpretation Baron Parke concurred.

GENERAL OBSERVATIONS.

In conclusion, I would say that the amount for which a life is insured cannot, of course, be received until after death and distinct proofs of death have been furnished the company, and those who would claim the benefit of the insurance must prove the fact whether it is open to doubt or not. The only case that I can imagine might arise in which there would be other than the distinct and actual proof of death, would be in the case of a person going away and not being heard of again by his relatives and those he left behind him; and here all the authorities concur in the rule of the common law, that the presumption of life with respect of persons of whom no account can be given ends at the expiration of seven years from the time he was last known to be living; and that after that period the burden of proof is shifted upon those who assert that he is still alive. This is the principle of common law, but while it does this, it will not presume death at any particular time within or during such period, and therefore it becomes a question sometimes of great nicety, and at other times a question quite impossible to answer, to show that the assured had died before the policy on his life had ceased to exist in consequence of the regular payment of premium not having been made. The issue in such cases being an issue in fact, a jury is at liberty to find the fact of death within the period of seven years, or even at any particular time upon the circumstances proved in the case. The last English case I can find in this is *The Prudential Assurance Company vs. Edmonds*, *Law Reports, 2 Appeal Cases (House of Lords) 487*. A policy on the life of a person was granted in 1863; an action was brought upon it in 1874, and the question was whether the assured was then alive or dead. He had been absent from his former home for more than seven years. His sister and others who had lived where he had formerly lived, gave evidence as to his ab-

sence, and that they had not heard of him for more than seven years. There was a niece who had said that when she was in Melbourne in 1872 or 1873, she saw a man whom she believed to be her uncle, the assured, but he was lost in the passing crowd before she was able to get to speak to him. No effort appeared to have been made to find him at Melbourne, and the other relatives believed the niece to have been mistaken. The jurymen expressed a similar opinion. The House of Lords decided that there was evidence that the assured had been absent for above seven years without being heard of, and that he had not been heard of if this niece was mistaken, and if the jury, from the improbabilities of the case or otherwise, believed her to be mistaken, then the assured, having been absent for above seven years without being heard of, must be presumed to be dead, and the term "heard of him" means something more than a hearing of that which could be treated as inaccurate—a piece of mere gossiping suggestion.

And to close, I would say that policies of life insurance have been held to be the subject of a *donatio mortis causa* and have been treated in this respect in the same way as bonds, mortgages and promissory notes. Cockburn, Chief Justice, said: "We do not think there is any distinction in this respect between these policies and bonds and mortgages, and they are the subject of *donatio mortis causa*."

Abnormal Termination of the Ureter in the Female.

Wölfler (*Prager med. Woch.*, No. 24, 1895) has written a valuable article on this condition. Five instances are recorded of the ureter opening into the urethra. In one of these the bladder was absent, yet the patient, aged 47, did not suffer from incontinence of urine; nor was this complication present in two other cases where the bladder existed, but retention and hydronephrosis were observed in another of the series. Lastly, incontinence of urine was observed in one case, but the patient was aged 14—an age when that affection is frequent without abnormalities. The ureters were made to open into the bladder by a plastic operation.

CORRESPONDENCE.

"THE LATEST THING IN SURGICAL FADS."

A REPLY TO G. FRANK LYDSTON, M.D.

EDITOR MEDICAL AND SURGICAL REPORTER.—Sir:—Ridicule is a dangerous weapon. The professional prophet follows a precarious occupation. Dr. Lydston lacks ability to use ridicule efficiently, and knowledge to render his prophesies valuable. He mistakes play of a brilliant imagination for argument, and seems to be incapable of placing a fact in its true and logical relation with other facts.

I. "The avidity with which", he says, "certain surgeons seized upon the straw held out to them by Dr. White was amusing. There appeared to be a desperate struggle to determine who should be the first to perform the operation suggested."

Is it not barely possible that these surgeons were eager to cure patients, suffering terribly, who could be cured in no other way?

II. "The normal prostate is by no means so easily outlined by the examining finger as some would have us believe." (With beautiful inconsistency our author proceeds to give several instances in which he, at least, had apparently no difficulty in determining the condition of the prostate).

Is it not beyond dispute that with the finger in the rectum the surgeon can make a fairly accurate estimate of the consistency, size and outline of the posterior-inferior portion of the prostate; and that with the additional aid of a sound in the bladder some idea can be formed of the condition of the vesical aspect of the gland? I have never seen it claimed that any accurate mental picture could be formed of the upper segment of the prostatic urethral collar by the aid of the finger alone; but even here the expert can with the cystoscope give us reliable information.

III. He then proceeds to give us several cases which have no real bearing on

the point at issue. In the first case quoted, one testicle was, he says, "evidently out of service." He gives no evidence whatever to prove this assertion. After removing this testicle the patient suffered from an epididymitis of the remaining testicle. At the time of the report the prostate was "larger than normal." Cases 2, 3 and 4 are those of monorchids who had more or less enlarged prostates.

Dr. White nowhere claims that monorchids may not become the victims of prostatic hypertrophy.

His conclusions, after giving the evidence, "for and against," are as follows: "It seems obvious that, in view of the contradictory character of the observations above recorded, no safe deductions can be drawn from them at this time, as to the practical value of unilateral castration in cases of prostatic enlargement. * * * * It seems probable that the results, even though occasionally favorable, will be slow and uncertain compared with those following the bilateral operation."

(Pamphlet reprinted from *Annals of Surgery*—pp 44-45.)

After a good deal of aimless drivel, our writer comes to the sapient conclusion, "that the radical operations of prostatotomy and prostatectomy at an early period of the disease are not performed with sufficient frequency." O, Tempora! O, Mores! The follower of White, who thinks that his patient needs orchidectomy (an operation "easy of performance," and not in itself dangerous to life) is accused of being tainted with "surgical itch and cupidity", and is advised to reform and to inflict on his patient prostatotomy, an operation which to-day is almost universally considered a temporary palliative, or prostatectomy, a procedure of uncertain efficacy, difficult of performance, of

great severity, and attended with a mortality of one in five (Moullin).

Professor White's operation needs no defence from me. He has, I believe, introduced a remedy for enlarged prostates which will safely and permanently relieve thousands of properly selected cases. With true scientific frankness he has given the world all the facts in his possession bearing on his discovery. Certainly there is no reason why he should be ashamed of the offspring of his brain. "Out of one hundred and eleven cases, only nineteen were not definitely stated to have improved at the expiration of varying periods." Of

these nineteen, nine did not live long enough to decide the success or failure of the operation, nearly all succumbing to uremia, the result of neglected prostatic hypertrophy with its too well-known consequences of cystitis, ureteritis and chronic suppurative pyelitis and nephritis, "leaving only ten per cent. of apparent failures."

White's operation is, it is true, only in its infancy. But it is a lusty, sturdy infant, reminding one of *Puck's* cartoon of "our infant American industries."

FRANCIS L. HAYNES, M.D.

Los Angeles, Cal.

IS BOILED LINSEED OIL HARMFUL?

J. F. writes that by mistake a certain druggist sold boiled for raw linseed oil. About three pints of this was given to a strong horse which had been foundered the previous day by drinking cold water. The oil was administered at midnight, and six hours later the horse was dead. The charge is made that the boiled oil caused the animal's death.

No definite answer, probably, is possible, owing to our incomplete knowledge regarding the chemistry of oxygenized oils, and more so as to physiological values of the end-products of modified oils. Drying oils are supposed to consist largely of linolein, a glyceride of linoleic acid. Through the influence of absorbed oxygen the linolein is split into its component parts whereupon the glycerin is largely oxidized into various, partly acrid substances, with a simultaneous liberation of carbon dioxide and water, while the linoleic acid is converted into the resinous linoxyn. How far these changes have progressed in "boiled oil" we will not attempt to say. However, in heating linseed oil with lead or an oxide or salt of the same, a certain percentage (about five per cent.) of the metal enters into solution, while also some acrid oleoresin is formed. By the changes thus induced the property of absorbing oxygen, and hence oxidizing and "drying," is vastly increased.

The question, then, resolves itself into this. (1) Are linoxyn or any of the other oxidation products sufficiently toxic, or is there enough lead in solution to prove fatal to man or beast? (2) Are the different constituents of boiled oil sufficiently irritating to aggravate an already existing physical disturbance not fatal in itself? (3) Was the oil in question produced by the methods here considered, or is it a base substitute or mixture, containing ingredients not ordinarily belonging to true boiled linseed oil, and which might be poisonous?

As to the particular instance in question, the first question arising is that of correct diagnosis. Founder may be brought on by cold water draughts, but it also results by metastasis, *i. e.*, by the shifting of inflammation from one organ to another. Drinking of cold water by horses may induce, aside from founder, inflammatory conditions of intestines, and more particularly of the kidneys. The horse may have died from any one or combination of these causes, or the trouble may have been superimposed upon an already weakened constitution. However, while no assertion to that effect is made, the boiled oil may have proved sufficiently irritating to aggravate the original symptoms and thus indirectly bring on death. — *Western Druggist.*

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PHILADELPHIA, SATURDAY, NOVEMBER 16, 1895.

EDITORIAL.

FEEDING THE SICK.

"Physician's Day" is a feature of the "Pure Food Exposition," an exhibition annually given to promote the use of pure food-stuffs, introduce new food preparations and to advertise various novelties and conveniences related to the culinary department of every day life. In addition to the display of materials and the means for manipulating them, there is, what is probably the most attractive feature of the exhibition, a series of lectures and demonstrations on the scientific preparation of food. These demonstrations are given by Mrs. Rorer, a lady who, by scientific education, long experience and sound common-sense is eminently fitted to teach scientific cooking, even to the physiologist.

Physician's day is devoted to the consideration of the materials and modes of preparation of food for the sick. Invitations are sent to physicians throughout the city and vicinity, to training

schools for nurses and to hospitals. Numbers of physicians have found it profitable to attend the exposition, and large delegations of student nurses are present for instruction.

Before such an audience, recently, the lecturer expressed herself in unmistakable terms concerning the ignorance of the ordinary trained nurse of properly preparing food for the sick. She said with emphasis:

"The nurses of this city know full well how to keep rooms beautifully neat and clean, but when it comes to preparing anything to eat for a patient they are completely at a loss, and why shouldn't they be, for how many of them could tell you anything about the chemical composition of either an apple or a potato?"

Mrs. Rorer is right, and she need not have confined her statements to the nurses of this city. This lack, however, will be rectified so soon as medical men

realize the immense importance of food in the treatment of disease, and demand the observance of their instructions in matters of diet with anything like the scrupulousness which they insist upon in the preparation and administration of drugs.

At the conclusion of the demonstrations of a number of ways of cooking for the sick, the lecturer said :

"If I could only impress upon this audience one sentence out of the many I have uttered this afternoon, my mission would be complete. Whenever you have a patient to feed, find out what part of the physical economy is affected and cater to it."

Incidental to the cooking, and of scarcely less importance, is the serving of food to the invalid, and at the lecture the table was set with a variety of trays, on which the edibles for the sick were displayed in a fashion to tempt even the capricious appetite of the invalid. There is quite as much in serving the sick as in cooking for them ; therefore, this side issue was full of home truths. On pretty trays were laid embroidered doilies, a tiny vase containing a bunch of violets or a few pinks, and the beef tea, albumen and milk or other food for the sick in exquisite china dishes that made one hungry just to look at them.

We note a few of the recipes given which are useful, and, at least in the hands of the lecturer, apparently not difficult to compound :

Koumys—Heat two quarts of milk to 98 degrees Fahr. Boil for a moment two tablespoonfuls of sugar and two of water, add to milk, dissolve a third of a yeast cake in two tablespoonfuls of the milk. Add it also to milk. Mix, cork and tie tightly. Stand in a warm (68 degrees Fahr.) place over night or twelve hours. Then turn on sides in a cold place for twelve hours, and it is ready for use, and is good as long as sweet.

For consumptives all fatty foods are permissible. Suet in milk is particularly good for those suffering with lung troubles. This is prepared by taking one ounce of real suet chopped fine and simmered in a double boiler in one quart of milk for thirty minutes. Strain carefully through two thicknesses of cheese cloth and salt to taste.

Beef tea, which, as all know, is so frequently a white non-nutritious fluid, is, if made according to Mrs. Rorer's method, a veritable life-giving liquor in which all the juice of the meat plays an active part, so that the patient receives the very essence of the beef, which means to the invalid strength and health, brain, muscle and nerve.

To make this take one pound of finely chopped beef to one pint of cold soft water. Soft water is best, as it softens the fibre of the meat and makes it easier for the juices to exude. Mix well together until the meat is reduced to a pulp, stand over fire where it cannot possibly boil, watch carefully, as the color must not be destroyed, strain through a colander and return to kettle.

Beat the white of an egg and the shell with two tablespoonfuls of cold water, stir this into the beef tea and return to the fire, but do not under any circumstances let it boil. Strain carefully through two or three thicknesses of cheese cloth, add one-half teaspoonful of salt, and if you have been clever the liquid thus obtained will be as clear as wine. To make beef tea sounds like an easy task, but it is in reality a most difficult one if done properly. Beef tea to be right should never for an instant reach the boiling point. The clarifying is done through the agency of the white of egg and egg-shell as directed. Use a cloth dipped in cold water through which to strain it.

Beef juice is made by merely pressing a piece of broiled steak that is quite un-

derdone. It is only broiled in order to keep the juices and have the crispness of the outer side add to the flavor.

Unleavened bread and steamed apples were two dishes specially suited for invalids and were prepared in the following manner:

Unleavened Bread.—Put into a bowl one quart of flour; add a teaspoonful of

salt and rub in two tablespoonfuls of butter or oil. Add sufficient milk and water to make a stiff dough; knead well, roll out in thin sheets, or make in small biscuits and bake in a moderate oven.

Steamed Apples.—Core bright red apples and place them in a steamer. Steam for twenty minutes. Serve warm with whipped cream.

ABSTRACTS.

MASSAGE IN THE TREATMENT OF LUXATIONS, BRUISES, AND CONTUSIONS.

The growing popularity of this method, as applied to sprains, contusions, and dislocations, is well attested by the comparative frequency with which articles laudatory of massage, as applied to surgical affections, have appeared in the periodicals of the day. Of these—many of them brief reports of cases, others more elaborate—none is more noteworthy than the contribution of Van Arsdale and Gallant (*Medical News*, April 20, 1895). These gentlemen, as a result of an exceptionally wide experience, hold that massage will prevent swelling, pain, and stiffness, or, when these symptoms have become manifest, allay them promptly, and that it greatly shortens the time of treatment and permits of prompt use of the injured part. A mixture of equal parts of ol. hyoseyami coct. (Ph.G.) and pure chloroform has proved in their hands the most serviceable lubricant. The treatment should be repeated twice daily, morning and afternoon, for half an hour at a time. After massage the joint should be rested for half an hour and then should be used. Elevation of the part between *séances* is always advisable. Van Arsdale thus describes the method of rubbing: Beginning well above the tender or swollen portion of the limb, gentle, systematic, upward strokes are carried well above the knee.

These first strokes are made with the pulp of the fingers, both hands being used and held parallel with the leg. At first the sides of the leg are attacked, one by each hand; but soon more of the palmar surface of the fingers is brought into contact with the skin of the patient and gradually surrounds the whole circumference of the leg, each stroke being long and slow (not more than thirty to the minute). As the force of the pressure is gradually increased, the pulp of the thumb is brought into play, and the right hand supersedes the other in force and activity, until it will become necessary to grasp the lower part of the heel or the metatarsus, and make countertraction, in order to steady the limb and permit of a greater development of force.

When the leg, by a change of color from blue to white, shows evidence of depletion of venous blood and lymph, the strokes may begin lower down and more directly over the seat of injury, always being carried upward, with the pressure exercised by the fingers—delicate at first, but with ever increasing intensity—with the thumb of one hand only, while the other hand steadies the foot in the most convenient position.

The tissues, which were hard and resistant to the touch at first, soon become softer and more elastic, and with this

the pain at first experienced by the patient grows gradually less and his confidence in the operation increases.

From time to time, whenever the superficial veins of the leg that were first emptied appear engorged or swollen, it is considered imperative to continue the strokes upward to above the knee, and repeat the massage of the upper leg in order to evacuate the newly imported supply of blood and lymph well into the vessels of the thigh and, as it were, "drive the fluids home." In like manner the toes and the portions below the place of injury are visited and their tissues also are emptied of the stagnant fluids.

The region around the ankle is now considerably smaller, paler, and softer than at first, and the thumb, keeping up the upward stroking all the time, and moving with an independent action against the fingers placed opposite to it on the limb, busies itself finding out the special points around the joint where more marked hardness and stiffness may be felt, and in diving down between the bony projections and tendon sheaths, while it glides more lightly over the prominences and ridges of bone. The well-trained thumb is very quick at discovering the points of special soreness, even without the help of the patient's subjective sensations, and will make them special points of attack. When fatigue is experienced the hands are changed and the work carried on with the left.

Towards the end of the *séance*, which must be indicated by the patient's sensations and condition, the strokes are made to grow gradually more gentle again, and, becoming longer, extend from the foot well up to the knee, more closely resembling those described by some authors as effleurage. This procedure always gives the patient a sensation of pleasure and relief, and when the *séance* is ended he should be entirely free from pain, at least for a time. If he is not, it is a sign that the massage has not been properly applied.

Graham, in the *Edinburgh Medical Journal*, writing on the same topic, thus expresses his views: No two masseurs are alike by nature, nor in skill, tact, and education; and the one who knows is anatomy and physiology well, when

called to a recent acute sprain, will not begin at once to massage the injured joint, but a distance above it, on the healthy tissues, by gently stroking or effleurage towards the heart, gradually proceeding nearer and nearer to the painful place. This has a soothing effect, and pushes the flow along in the veins and lymphatics, making more space in them for the returning currents coming from beyond the region worked upon, and carrying away the fluids that have leaked out of the vessels. The same should be done on the part of the limb beyond the joint, for the circulation is hindered, both in going out and coming in, by reason of the swelling. Next, the masseur who knows his business will begin again at a safe distance above the injured joint, and use deep rubbing, kneading, or massage properly so called, one hand contracting as the other relaxes, alternately making circular grasps, and this should be done on the parts above and below the seat of the sprain. By this procedure the effects of the previous stroking or effleurage are much enhanced, an analgesic or agreeably benumbing effect is produced upon the nerves, which extends to the painful place, and the retarded circulation is pushed along more vigorously, making room in the vessels for the swelling, the effusion, the dammed embargo caused by the landslide of blood and lymph farther up the stream to float off, and preparing the way for the next step in the treatment. At the end of fifteen or twenty minutes of this manner of working, gentle firm pressure can be made immediately over the swollen and but recently very tender parts, which in a few seconds can have circular motion with the greatest push upward added to it; and this, if sufficient tact be used, will in all probability not hurt, but be positively agreeable. By this the effusion is spread over greater space, pressed out of the tissues as water is out of a sponge, and brought into more points of contact with the veins and lymphatics, by which it is absorbed and carried off, the same pressure that causes the dislodgement of stagnating fluids also aiding absorption by pressing them into the small vessels. Then a snug, well-fitting bandage should be applied.

Under this plan of treatment, used twice a day, the comfort produced and the speed of recovery would scarcely be believed unless experienced by one who had had a similar injury treated in the regular orthodox way, with absolute rest and immobility, by means of fixed dressings.

Some years ago the author published the results of massage in more than seven hundred cases of sprains, joint contusions, and distortions, of all degrees of severity, treated by many different observers, most of whom were French, German, and Scandinavian army surgeons, in order to confirm the experience obtained in some of his own cases.

The invariable result of each and all was that such injuries thus treated got well in one-third of the time that similar cases did under the usual method of absolute rest and fixation, and with less tendency to subsequent weakness, pain, and stiffness.

Experience teaches that the sooner after a sprain massage is begun the quicker is the recovery. In Germany the military authorities now require a semi-annual report from their surgeons upon the results of massage in injuries of joints; and the statistics of Gassner, Starke, Korner, and others clearly show the rapid results of this method, and the economy of time to the soldier. He fears that it will be a long time before many of the physicians and surgeons in the United States will condescend to try their hands at massage. Indeed, most physicians adopt, prescribe, or tolerate massage in the same way that Constantine the Great embraced Christianity—more from policy than from conviction.

Graham, further, quotes the experiments of Mosengeil, who injected into corresponding joints of rabbits India-ink. With each rabbit he masséed one of the joints at regular intervals, and left the corresponding joints on the other limb untouched. The swelling and stiffness caused by injection rapidly disappeared under massage, and on examination of the masséed joint after the animal was killed it was found emptied of its contents. On microscopic examination it was seen that the greater portion of it had been forced into and penetrated through the synovial membrane.

In the joints which had not been masséed the India-ink was found in the joint mixed with the synovia, forming a smeary mass, and it had not even penetrated the tissue of the synovial membrane.

The same results were uniformly obtained in all the experiments, showing that absorption takes place from joint cavities by means of lymph spaces and small openings communicating with lymphatic vessels, and through these with lymphatic glands.

Castex (*Archives Generales de Medecine* for 1891 and 1892) experimented on dogs for the purpose of observing the effect of massage after injuries. The injuries were intentionally produced in corresponding places in two limbs of a dog. The seat of one of these injuries was masséed, one was left alone, and the tissues that were hurt were examined under a microscope. The more injured limb was always chosen for treatment, and the other had no massage, but was left to the natural evolutions of the injuries. The effects, immediate, consecutive, and remote, were carefully observed by experts in laboratory work, who were not told which leg had been masséed.

Massage was done immediately or very soon after the injuries; even in the case of dislocations, as soon as these were set, and always with remarkable relief to the pain, swelling, and stiffness, so much so that after a few massages of stroking or kneading of five or ten minutes each once a day the dog had full use of the leg that had been masséed, whereas the leg that had not been masséed remained swollen, stiff, and painful for a long time, and in some cases did not recover at all.

The experimenter states that no matter how severely the dogs are injured, especially the Scotch shepherd dogs, they do not seem to mind it at all after it is over, running about as if nothing had happened as soon as they are set at liberty.

All the experiments tended to one conclusion; one typical result is quoted. The two shoulder-joints of a large watch-dog were dislocated by inward flexion. The head of the humerus of each was plainly visible under the skin, showing a luxation forward and inward

—intracoracoid. It was easily reduced by traction. Five minutes of massage was at once given to the right shoulder, which seemed to afford relief, judging from the gratified way in which the animal submitted, and after this a figure-of-eight bandage was applied around both shoulders. The dog had massage for five minutes daily to the right shoulder alone, and for the first three days he walked with difficulty. The right shoulder gradually became less painful to touch, and he stood firmer on that side. On the fourth and subsequent days all sorts of pressure upon the masséed side were borne without discomfort, when the other shoulder was pressed, the dog growled and attempted to bite. Six days after the dislocations he supported himself well on the masséed limb, but held the other up, and the non-masséed shoulder was still swollen and painful. Both shoulders then stayed in place, in spite of passive movements that might have dislocated them. On the eighth day the dog walked well with the masséed limb, but held the other up, and the latter was still swollen and painful, and there was crepitation in the joint. Thirteen days after the injuries the dog took an occasional step with the limb that had not been masséed, and two months later it was in about the same condition, while he freely used the limb that had been masséed in walking and running.

There was then atrophy of the muscles of the left shoulder, evident by the prominence of the bones; none of the muscles of the right.

Soon after the swelling from the injuries to the dogs had subsided, the muscles became more or less atrophied in the limb that had not been masséed, but not at all in the limb that had been masséed. At the end of five or six months the dogs were killed and the tissues examined under the microscope. The muscular tissue of the side that had not been masséed presented a diffuse sclerosis; the connective tissue intervening between the fibres and bundles of fibres was thickened; there were interstitial hemorrhages, especially in the cellular tissue around the muscles; the internal and external coverings of the bundles of muscular fibres (perimysia) were infiltrated with blood, and also the

fascia outside of this. The transverse markings of the muscular fibres (striæ) were effaced in many places, while the longitudinal striation or marking which is not seen normally was very distinct. The muscular tissue from the corresponding region that had been masséed was found to be natural in every respect. Castex has forgotten to mention the appearance of the sarcolemma. In all probability this also was hardened, thickened and infiltrated with blood, as were the outer and larger coverings.

The blood-vessels appeared perfectly natural from the masséed side, but those from the side that had not been masséed presented a hyperplasia of their external coat.

The nerve filaments were found to be normal in the masséed side, while in the side that had not been masséed there were abundant evidences of perineuritis and interstitial neuritis exerting distinct compression of the nerve fibres. The nerve-sheath was at least three times as thick in the non-masséed side, and the connective tissue around the perineurium was also thickened with numerous new-formed cells. The small vessels in the perineurium were also the seat of a peripheral hyperplasia or thickening. The lesion of the nerves was more marked than that of the vessels.

In human beings Castex found that when massage was begun early or from the very first in contusions, sprains, and dislocations, not only were the immediate symptoms relieved, but also the subsequent serious consequences that are so apt to follow these injuries. Wasting weakness, contractions, and stiffness were prevented. But when he tried massage in old cases of muscular atrophy or wasting following joint injuries, he got no increase of muscular tissue. The stiffness was removed, the muscles became suppler, but they still remained thin and lacking in strength. If he had combined passive and active movements with the massage, Graham suggests that he would probably have obtained growth and strength of muscle. He found the galvanic and faradic currents of benefit in promoting increase of muscular tissue. Muscular contraction from electricity is but another form of motion.

Numerous theories as to the cause of muscular atrophy from injuries of joints

have been considered and abandoned. The injury to the joint starts up more or less arthritis; the articular nerves are irritated; this irritation is transferred to the spinal cord; the nerve-centres affected act in turn upon the centrifugal nerves going to the muscles, and these determine at their peripheral ends the muscular atrophy. With a view to the elucidation of this, Deroche has repeated seven times, and always with the same results, experiments which were done for the first time at the College of France by Raymond and Ovanoff. He divided the posterior roots of the last three lumbar nerves of the left side

in dogs and rabbits. After cicatrization had taken place, he assured himself that numbness was complete from the thigh to the knee of the left lower limb, so that irritation of this region was not felt. The corresponding limb was left intact. An arthritis was then set up in both knees by introducing a thermo-cautery into them. No pain was felt in the left knee, but much in the right. Three months afterwards the animals were killed, and in both knees the lesions of arthritis were found; but the muscles of the thigh of the left limb were of normal size, of the right atrophied.—(Ed. *Therapeutic Gazette*.)

CURRENT LITERATURE REVIEWED.

IN CHARGE OF SAMUEL M. WILSON, M. D.

History of a Case of Tuberculosis of the Bladder.¹

Mr. G. E. S., age thirty-one, gives a family history of tuberculosis; father dying at fifty, having suffered from tuberculosis two years previous to the birth of this child. The mother died five years later from the same disease. Save always being troubled with frequency of urination, this young man enjoyed good health up to five years ago. Four years ago he had an attack of renal calculi and one year later frequency of urination became so troublesome that he sought advice. The urine contained pus, but no stone could be found in the bladder, but in its lower part was a small nodule, from which the instrument drew blood. Two small hard nodules were found, one in the head and one in the body of the epididymis which, the patient says, have been present as long as he can remember. No evidence of disease of the prostate was found and no tubercle bacilli in the urine.

Fearing abrasion of the mucous membrane might form new foci of disease, the cystoscope was not used.

The patient was put on Fellow's hypophosphites and one grain capsules of iodoform three times daily. At the end of twelve months his condition was about the same, and he was given methylene blue for one year. Urinary analysis showed lessening of the pus in the urine, but there was loss of flesh, poor appetite, night sweats, evening temperature of 101°-102°, dull pain over the pubes, and his stomach would no longer retain the drug. Change of climate to Nassau was advised and iron, strychnia and calisaya given. After two months he returned with normal temperature, marked gain in flesh and good appetite. Several months later he had an attack of follicular tonsillitis with persistent swelling of the glands of the neck and a return of night sweats,

evening rise of temperature and loss of appetite and flesh. He now went to Vichy, in the south of France. Treatment—tonic. In two months he returned; all the bad symptoms were gone and there was considerable gain in flesh. Examination of the urine showed decrease in the amount of pus, but the frequency of urination is unchanged. The treatment now followed is iodoform and hypophosphites.

A noteworthy point is the absence of involvement of the prostate, the disease showing itself in the epididymis and the wall of the bladder with a lack of the usual symptoms of tuberculosis of the bladder. There was no acute pain and no passing of blood. This case seems to show the inefficiency of drugs to control or even retard the disease, while ocean voyages and change of air showed immediate beneficial effects.

Insured Lives as Affected by Gout.²

At the suggestion and request of the general manager, I have read the report of the actuary on the experience of the company with gouty subjects, and have carefully considered the medical aspect of the subject. He has subdivided the risks according to the duration of the insurance, the ages, and the proportionate height and weight of the insured and the date at which they were accepted, and in all these divisions finds the same extraordinary increase of loss and the presumption remains that this increased mortality is due to the fact that the lives of the insured were deteriorated and shortened by their gout. The number of cases, forty-eight, is too small to admit of much generalization, and therefore I have carefully gone over each individual case to see whether this view would be sustained, or whether there were any other circumstances which might

¹ Homer E. Fraser, B.S., M.D., *Brooklyn Medical Journal*, October, 1895.

² E. J. Marsh, M.D., *Glasgow Medical Journal*, September, 1895.

account for the loss. The action and rules of the Mutual Life have always been in accordance with the opinion that gout tends to shorten life in the majority of instances, but in a few exceptional cases they have recommended the issuance of policies. How carefully such selection has been made appears from the actuary's report that at the end of 1887 of 300,000 policies issued only fifty eight were to forty-eight persons in whose applications was any statement indicating a history of gout. Of the forty-eight cases reported I think four should be omitted, as one was evidently reported gouty by mistake and the other three had never had an acute attack. Of the forty-four cases insured fifteen have died, a mortality of thirty four per cent., which far exceeds that of the company's experience in general. We would consider that this might be the result of coincidences rather than cause and effect were it not that our conclusions are borne out by the judgment of the physicians and the experience of other life insurance companies which have had more risks of this class. The question in the mind of Sir Dyce Duckworth in his recent treatise on gout seems to be how far such risks are impaired and at what rates they should be valued in accordance with the practice of English life insurance companies.

New Treatment for Epididymitis and Orchitis.³

In these affections hot poultices, with or without tobacco, together with veratrum viride internally, have given the most relief in my hands until by an accident two years ago I tried the application of guaiacol along the upper portion of the scrotum and cord. To reduce temperature and quiet pain I first applied it in a case with a temperature of 104°. To my surprise in two hours afterward the temperature was reduced to 99.5° and the pain, which had been intense, was entirely gone. It is true that hot applications were applied in this case within a half hour after the application of the guaiacol, but I have not seen hot applications alone relieve the pain or reduce the temperature with such rapidity. Ten minims of the drug are dropped into a butter plate or other small receptacle and then painted along the line of the cord and the upper portion of the scrotum. This is left uncovered for half an hour, the testicles and scrotum being elevated in the meantime. After this my own method consists in laying the scrotum upon the abdomen, covering it with a layer of flannel wet with hot water and laying over this an ordinary English icebag filled with water as hot as the patient can bear. This retains the heat much longer than the ordinary poultice and if not filled too full produces a slight compression without pain. This is kept up until bed-time, when the patient is to apply an ointment of twenty-five per cent. ichthylol in lanolin. This is surrounded by rubber protective and the organ supported on the abdominal wall. The following morning the hot applications are renewed for half an hour or one hour and then the ointment reapplied until evening. If pain and temperature return a new application of guaiacol may be made, but generally it is best not to do so until thirty-six hours later. After the pain and temperature have subsided the application of the hot bag for one hour twice daily and the in-

ternal administration of a saline cathartic once daily and small doses of iodide of potassium will hasten the absorption of the induration.

The results are no better, so far as the final issue is concerned perhaps, than those obtained by other methods, but the immediate relief of pain, the very short period of confinement and the absence of any untoward symptoms or results, convince me that this method is an improvement. The guaiacol should never be painted upon the lower portion of the scrotum or upon the scrotal tissue proper, as it is liable to produce excoriations in some individuals, and only the pure Menck's guaiacol should be used.

Iodoform Ointment Injections in the Treatment of Suppurative Adentitis of the Groin.⁴

The chief objects to be obtained in the treatment of suppurating inguinal buboes are their rapid disappearance, an amelioration of pain and the absence of a compromising scar in the groin. It was not until 1856 when aspiration of the pus and injection of diluted tincture of iodine was advocated that such favorable results were in a degree obtained. Scott Helm, in 1886, was, I believe, the first to substitute iodoform for tincture of iodine.

In 1889, Von Eichsloff reported a series of cases, treated by injections of iodoform and ether, which he employed in two different ways, as follows:

1. The pus was withdrawn and the cavity irrigated with boric acid solution and then injected with the iodoform and ether mixture, the puncture being covered with an ordinary dressing, left in place for three days. In some cases he had to make a second injection, but never a third. A cure was accomplished in from three to eight days.

2. The parts were cleansed, and the iodoform-ether mixture injected without evacuating the pus. As a rule two injections were required, and cure obtained in about twelve days.

In the same year Yontan described a method as follows: The parts are shaved and cleaned; the bubo opened with a lancet, and all the pus forced out; the abscess sac then irrigated with diluted Van Swieten's solution, and iodoform vaseline injected with a glass syringe, previously warmed in hot water. A cold wet dressing is applied to congeal the ointment at the opening.

I have satisfactorily employed this method, with the addition of peroxide of hydrogen, as follows:

The operative field is shaved and rendered surgically clean. A few drops of four per cent. solution of cocaine are injected beneath the skin at the point for puncture. A straight, sharp-pointed bistoury is thrust into the most prominent point of the tumor until pus flows. All the pus is forced through this opening by firm but gentle pressure, as the procedure is painful. The cavity is irrigated with pure peroxide of hydrogen until it returns clear. It is then irrigated with 1.5000 solution of bichloride, and this carefully squeezed out. The cavity is now filled, but not painfully distended, with ten per cent. iodoform ointment by a previously warmed glass syringe. A cold, wet bichloride dressing is now applied with a fairly firm spica bandage. In order to secure the best results, this method should be employed only when the glands are thoroughly broken down.

³ James P. Tuttle, M.D., *Journal of Cutaneous and Genito-Urinary Diseases*, October, 1895.

⁴ James R. Hayden, M.D., *Am. Jour. of Med. Sciences*, November, 1895.

PERISCOPE.

IN CHARGE OF WM. E. PARKE, A.M., M.D.

MEDICINE.

Permanganate of Potassium in Opium Poisoning.

In the *Therapeutic Gazette* (August), there appeared a brief note regarding a case of morphine poisoning, in which the patient is supposed to have ingested 30 grains of the sulphate of morphine, and in which recovery took place under a method of treatment in which the permanganate of potassium was largely administered hypodermically. Notwithstanding the arrays of facts in the exhaustive research of Dr. Sharp on this topic, our opinion in regard to the question remains unchanged and may be expressed as follows:

We think that there is little doubt that this substance, when given by the mouth during the time that morphine still remains in the stomach, possesses distinct antidotal influence, since by its powerful oxidizing properties it speedily destroys the alkaloid of opium. Even here, however, it should be remembered that the action of the permanganate in the human stomach must be far less efficacious, so far as oxidizing morphine is concerned, than it is when placed in a test-tube, since the presence of other contents of the stomach, of mucus, or the mucous membrane itself, to a certain extent helps to impair the full effect of the antidote. When it comes to the administration of the permanganate of potassium hypodermically for the purpose of acting as a chemical antidote in morphine-poisoning, we think that we have reached a *reductio ad absurdum*, for two reasons. In the first place, the permanganate of potassium possesses no powers which would enable it to act as a physiological antagonist to the influences of morphine, and the only way in which it can do good in poisoning by this drug rests upon its ability to oxidize the alkaloid. As a matter of fact, a solution of permanganate of potassium injected into the subcutaneous tissues is at once oxidized and changed into a different substance, and, therefore, can no longer act as the permanganate; and further, even if this chemical change did not take place, its hypodermic administration would be futile, since long before it could be absorbed and act upon the morphine, which is widely distributed in various portions of the body, it would have oxidized other substances which it might have met with in the blood or other tissues of the body. We are well aware of the fact that quite a number of cases of morphine-poisoning with recovery after hypodermic injections of permanganate have been reported within the last few months, but we have yet to see one in which strict scientific evidence was adduced that the recovery depended upon this method of treatment.

We doubt not that the hypodermic injections frequently administered have some influence in keeping the patient awake, or, in other words, of preventing him from forgetting to breathe, by

reason of the pain which these hypodermic injections adduce. In other words, the recovery in these cases, if due to this method of treatment, rests upon the peripheral irritation which is caused, and not upon any action of the permanganate of potassium.

In the case which was reported by Dr. Suker, the patient received no less than nineteen hypodermic injections, on an average every ten or fifteen minutes, which caused more or less swelling and discoloration of her arm, and that in addition she received that most powerful of stimulants, $\frac{1}{16}$ grain of nitroglycerin hypodermically, and $\frac{1}{4}$ grain of apomorphine; the first drug "acting nicely," according to the statement of the reporter.—(Ed. *Therapeutic Gazette*, October 15, 1895.)

Tryptic Digestion and the Internal Secretion of the Spleen.

A. Herzen (*Rev. Gen. des Sciences*) revives the theory as to the influence of the spleen on pancreatic digestion, which Schiff was the first to put forward in 1862. It has long been known that the digestive action of pancreatic juice on proteids is not continuous but intermittent, and that it appears regularly with the process of gastric digestion. Schiff showed that in animals from whom the spleen had been removed, neither the pancreatic juice nor an infusion of the pancreas had any digestive influence on proteids. Herzen has combined Schiff's views with Heidenhain's researches on zymogens. He finds that the volume of the spleen at any moment varies directly as the amount of trypsin in the pancreatic juice, and inversely as the amount of zymogen. Thus the maximum quantity of zymogen is present during starvation, when the trypsin and splenic dilatation are at their minimum. Six or seven hours after food the conditions are exactly reversed. Furthermore, admixture of infusion of congested spleen greatly aids the pancreatic digestion of proteids. The blood of the splenic vein has a similar action, that from other vessels none. Herzen concludes that in the living pancreas the protrypsin is transformed into active trypsin by the influence of a substance produced in the spleen in quantity proportional to the intensity of its congestion. The substance finds its way to the duodenum through the general circulation.

SURGERY.

Recent Advances in Cerebral Surgery.

Von Bergmann (*Centralblatt für Chirurgie*, No. 27, 1895), at a recent Congress of the German Surgical Society, held at Berlin, brought under notice certain advances that have been recently made in the department of cerebral surgery. In cases of tumor of the brain, surgery has of late

done very little beyond facilitating a correct diagnosis and rendering operative interference less dangerous. In Jacksonian epilepsy surgical treatment is usually followed by relapse, and can effect a certain cure only in those cases in which the convulsions are due to the compression of a circumscribed cortical motor centre by a tumor, as, for instance, a cyst of traumatic origin. On the other hand, very decided progress has been made in the operative treatment of different forms of intracranial suppuration of otitic origin, such as cerebral abscess, epidural suppuration, infective thrombosis of the lateral sinus, and leptomenigitis. The most dangerous forms of chronic aural suppuration, which is usually excited by a collection of cholesteatoma in the interior of the ear, are indicated by intercurrent acute and subacute attacks, with fetid discharge, and by the presence of polypoid granulations on the tympanic cavity and the auditory meatus. The extension of the inflammation through the thin and carious tegmen tympani sets up pachymeningitis, which, in its turn, gives rise to an extradural or epitympenic abscess, or to an intradural cerebral abscess. The cerebral abscess, when small and in an early stage of development, is situated at the surface of the brain, but as it enlarges it sinks into the substance of the affected lobe. As the diagnosis between a superficial and epitympenic abscess, on the one hand, and a cerebral abscess, on the other, is attended with much difficulty, Von Bergmann holds that it is necessary, in performing an operation, to expose to view both the extradural abscess and the part of the temporal lobe most likely to be involved in the extension of the suppurative process. An operation is described by which the upper and anterior surfaces of the petrosal bone are exposed through a quadrangular opening made in the squamous portion of the temporal bone, just above the line of the zygoma, and between a line in front drawn directly upward to the sagittal suture from the tragus, and a parallel line behind carried upward from the posterior border of the mastoid process. By this wound the mastoid antrum and cells may be opened, if necessary, and the sigmoid fossa be reached. In conclusion, Bergmann alludes to the successful results of the surgical treatment of infective thrombosis of the lateral sinus. Exposure, and incision of the sinus, with ligature of the internal jugular vein, proved successful in six out of thirteen cases treated by Jansen, of Berlin. These cases, added to those of Macewen and other surgeons, showed that the operative treatment resulted in recovery in twenty-seven out of forty-five patients. Thrombosis of the lateral sinus, it is pointed out, is often associated with extradural abscess on the roof of the tympanic cavity, and in most cases of cerebellar abscess forms a communication between this collection of pus and the suppurative in the middle ear. In exposing the outer surface of the mastoid process and the bone lying beneath this, search should be made for the mastoid emissary vein. Not only is the orifice a good guide to the sinus, but, in addition, the state of the vessel may help the diagnosis. If it contains pus, suppuration in and about the lateral sinus is indicated; if it be blocked by a thrombus, this will be a sure sign of thrombosis extending to the cavernous sinus. Von Bergmann, attributing much of the recent progress in cerebral surgery to improvements in technical de-

tails and in instruments, makes use, in opening the skull, of a circular saw worked by electricity, with which he divides the outer table, while the inner table is divided by the careful application of a chisel.—*British Medical Journal*.

Transfusion of Blood or Infusion of Salt Solution.

In an article under this heading (*Munchener Medicinische Wochenschrift*, April 2, 1895), Von Ziemssen calls attention to the fact that in spite of simplification of method, and in spite of the considerable number of cases which he had been able to report of the curative effect of repeated transfusions of blood in the same individual, the method of infusion of salt solution is given almost uniform preference in surgical practice, and blood transfusion is of little value in comparison. The reason for this is evident—namely, that in the majority of the surgical and obstetrical emergencies in which either infusion or transfusion must be employed, the infusion of salt solution gives a simpler and more rapid means of restoring the lost bulk of fluid in the vessels, and is, therefore, far preferable to the more complicated operation of blood transfusion. On the other hand, the effect of salt infusion is at the best only transitory, and it becomes necessary, according to Von Ziemssen, in most cases to follow it sooner or later by an infusion of blood.

The indications for choosing one or the other method are usually plain. For instance, in the acute anæmia resulting from sudden and profuse hemorrhage, salt infusion is to be chosen. In anæmia resulting from disease of the blood-making organs, on the other hand, in which the percentage of hæmoglobin and the number of red blood-corpuscles falls even below that which results from sudden and profuse hemorrhage, no one would think of resorting to salt infusion. In simple anæmia resulting from profuse hemorrhage in a healthy patient, the restoration of the normal condition of the blood is immediately begun and carried on by the blood-making organs; in pernicious anæmia, etc., the blood-making organs are so diseased as to be incapable of effecting repair of the blood-tissue.

In case of frequently repeated hemorrhage from internal organs, as in typhoid, ulcers of the stomach, etc., salt infusion, although it momentarily restores the heart's activity, leaves much to be desired on account of the fleeting nature of its effects.

It is in such cases as these that Von Ziemssen recommends transfusion of blood. He reports the case of a patient upon whom infusion of a litre of salt solution was performed, *ex indicatione vitæ*, with marked temporary improvement. The operation was performed in the evening, and the following morning the patient's condition again became critical, and a loud systolic murmur appeared at the heart's apex. An arm-to-arm transfusion of one hundred and seventy-five cubic centimetres of blood was performed. Immediately after the operation the patient sank very low, but was revived by an injection of camphor, and the percentage of hæmoglobin was from thirty-two to forty per cent. on the following day. The anæmia was rather resistant to treatment, but finally yielded to subcutaneous injections of

sodic arsenite, and in two months the patient left the hospital well.

In Von Ziemssen's opinion, the salt infusion in this case had an excellent but temporary effect, and without the transfusion which followed it, the result would have been fatal. He recommends that in all cases where the effect of salt infusion is temporary, it be followed by blood transfusion, and considers it questionable to wait more than twelve hours before resorting to this procedure. He finds that even during the operation the color of the skin and mucous membranes is improved, and that the subjective feeling of improved strength is quite marked for some hours after the operation; and he considers the good effects of the transfusion to be due as much to the fact that the blood-making organs are excited to activity as that the number of red blood-corpuscles is directly increased.

In our experience with infusion of salt solution, which has been chiefly confined to surgical cases, we have found that in a very large proportion of cases the effect, though always excellent, was but temporary, and that it was necessary, in order to render its effects permanent, to follow it up with copious and repeated enemata of salt solution and stimulants, or even to repeat the operation. In one case of hemorrhage from the ovarian artery following a laparotomy, in which the abdomen was reopened and the ovarian artery tied, the patient being enabled to bear the operation only by means of an intravenous infusion of salt solution which was performed at the same time, the effect of the infusion was marked, and the patient was put to bed with a better pulse than she had before the operation. Three hours later the symptoms of acute anemia—absolute pallor, restlessness, and complete failure of the pulse—again returned, and infusion was repeated with the same result as before. The result was more permanent, however, the effect being kept up by copious and repeated rectal injections of salt solution, and the case progressed to recovery. Other cases might be cited in which the same treatment was successful. Whether the stimulating effect of a transfusion of blood upon the blood making organs would have led to a better result it is difficult to say. At any rate, the same beneficial effect was noted in these cases from repeated salt infusion that Von Ziemssen found from his blood transfusion.

It is certainly true in these cases that in the first place the vascular system is depleted by the hemorrhage; then the tissues are emptied of serum taken up by the depleted vessels in order to enable the heart to act. The pressure in the vessels is so lowered by the hemorrhage that osmosis takes place from the lymph-spaces into the capillaries, so that the lymph-vessels as well as the blood-vessels are depleted. The bulk of salt solution given at the first infusion fills the blood-vessels temporarily, but is quickly taken up by the tissues, reducing the blood-pressure, and again reducing the volume of fluid with which the heart has to work, and causing the symptoms of acute anemia to recur. The second infusion fills the vessels again, and the tissues, being already supplied with fluid, do not absorb it from them; hence equilibrium is restored and the effects of the second infusion are permanent.

If a sufficient amount of fluid is injected at the first operation, the second may be unnecessary;

but it will always be a good rule to follow up an infusion by copious enemata of salt solution and, if necessary, to repeat the operation.—(Editorial in *Therapeutic Gazette*, October 15, 1895).

GYNECOLOGY.

The Diagnosis of Ureteral and Renal Disease in Women.

Kelly (*International Journal of Surgery*) considers the following methods of diagnosis: Inspection; Catheterization of the ureter; Catheterization of the pelvis of the kidney.

1. *Inspection*.—In the ordinary examination without incision, inspection is limited to the ureteral orifices in the bladder; and in order to see them and to carry out the succeeding steps to be described it is necessary to adopt the following method:

1. The patient is asked to urinate.
2. She is placed in the knee-chest position.
3. A ten per cent. cocaine solution is applied to and within the external urethral orifice for five minutes.
4. The urethra is dilated, when necessary, with a single conical dilator up to nine or ten millimetres in diameter.
5. A simple, cylindrical, vesical speculum, provided with an obturator, is next introduced into the bladder, and the obturator withdrawn, when the bladder at once balloons out with air.
6. The examiner, with a head-mirror on his forehead, now reflects into the bladder a light (preferably electric), held as near the sacrum as possible.
7. By turning the speculum thirty degrees to the right or left and dropping the handle the ureteral orifice comes into view.

The view is limited to this area, and three points are to be noted:

a. The appearance of the orifice and its surroundings. In inflammatory disease of the ureter or kidney this is often red, oedematous, puffed out, mammillated, or even slightly ulcerated. In tuberculous disease descending from the kidney the author has seen the infection thickly strewn over a triangular area, the apex of which was at the orifice.

b. The character of the fluid seen issuing from the orifice will often settle the diagnosis and determine the plan of treatment. In cases of hematuria, pyoureter, and pyelonephritis there is no difficulty in picking out the affected side, and seeing by the clear urine issuing from the other side that it is sound. When no discharge takes place it may sometimes be started by making bimanual pressure upon the renal tumor.

c. Normally the urine flows in intermittent jets of a clear, limpid fluid. If one side discharges in this way and nothing comes from the other, there must be some obstructive disease. Pus accumulations, when they escape, are likely to flow in a continuous sluggish stream. Attention is called to the fact that it is possible to catch the urine, as it escapes, directly in the speculum, and take it up for microscopic, chemical, and bacteriological examination without passing a catheter into the ureter.

II. *Catheterization of the Ureter*.—In carrying out this procedure strict attention must be paid to antiseptic details, which may be briefly summarized as follows :

1. Use an antiseptic speculum.
2. Cleanse the ureteral orifice with a pledget of cotton held in mouse-tooth forceps.
3. Have a sterile catheter not contaminated by handling.
4. Avoid contamination of the catheter during the introduction.
5. Place the sterile outer end (protected up to this time with a piece of rubber tubing) in a test-tube to collect the urine as it flows from the ureter without contamination.

Kelly uses three kinds of catheters. That which he prefers is a flexible silk catheter thirty centimetres long and two millimetres in diameter. In introducing the catheter, it is engaged in the orifice of the ureter and pushed in for a distance of twelve or fifteen centimetres. It may be left there to drain in the ureter as long as desirable. He also uses a simple, straight, metallic catheter, which, however, is more liable to bruise the ureter, and a short metallic catheter, which is introduced entirely within the bladder and ureter, and discharges through a fine rubber tube. Both ureters may be drained easily at one time with the flexible catheters.

By noting the time the catheter is put in place and removed the rate of flow may be determined, and by the examination of the urine the relative value of the two kidneys is determined.

III. *Catheterization of the Kidney*.—For this the author has had made renal catheters fifty centimetres long, which are kept sterilized in glass tubing, and when introduced are simply drawn out of the tubing as they are pushed into the ureter. In this way he has drawn pus from the kidney, evacuating a large renal abscess, and by irrigating the abscess cavity through the catheter he has cured a pyonephrosis.

THERAPEUTICS.

Aconite in Children's Diseases.

Prof. Comby, on account of the depressive and sedative effects of aconite, recommends it (*Lancet*) in all spasmodic states, as asthma, the asthmatic attacks of enlargement of the bronchial glands, in whooping-cough and similar states, in stridulous laryngitis, palpitation of the heart and convulsions. It is contraindicated in all states of prostration where respiration is impeded and the heart is about to weaken; therefore, one should not prescribe it in capillary bronchitis, in bronchopneumonia, pneumonia, in valvular heart affections, in pericarditis and in the collapse of severe forms of infectious diseases. The alcoholic tincture of the root is especially to be used. In adults one may employ aconitine, yet it is an alkaloid which must be given with great circumspection, administering it in doses of a tenth of a milligram, at regular intervals. It should not be used in children's diseases. The tincture of the root is to be given by the drops and never by the gram, and at regular intervals. In a child of two years one may give from five to ten drops; one of five years, twenty drops in twenty-four hours, while up to ten years thirty drops is a

proper dose. No great benefit is to be expected from small doses.

Scientific Teaching as to Alcohol.

At the National Temperance Congress held at Chester, Dr. W. Carter (*British Medical Journal*) discussed the Practical Benefits of Abstinence From a Physician's Point of View. Three broad principal facts, he said, had been firmly established: (1) Those people who entirely abstained from alcohol lived longer than those who used it even moderately; (2) the abstainer worked harder and longer than the moderate drinker; and (3) intellectual energy could be well sustained, and was as great without as with alcohol. In a paper on Alcohol as a Narcotic, Dr. McDowell Cosgrave, Professor of Biology at the Royal College of Surgeons in Ireland, stated that during the past few years a number of observers had tested the effect of small doses of alcohol upon the special senses, and had all come to the conclusion that from the very first alcohol acted upon the body as a narcotic and not as a stimulant. The same thing had been found true of the action of alcohol upon the mind. It caused mental processes to be slower but gave the idea that they were really faster. This explained how it was that people often continued to use alcohol when those around them saw that it was doing them harm. A paper, entitled Alcohol, the Antagonist of Hygiene, was read by Dr. Vacher, Medical Officer of Health for Cheshire, who said that the effect of alcohol on the living growing body, as had been shown experimentally, was to make growth less perfect and the system less able to resist the forces that made for decay. He then passed on to consider the question whether alcoholic liquors and the facility given for obtaining them co-operated with the sanitary authority or thwarted its best efforts; and it was shown that alcohol was the opponent of hygiene. Dr. F. H. Walsmsley, Medical Superintendent of the Metropolitan District Idiot Asylum, stated that pauper lunatics in London were increasing at the rate of 500 a year. It was now universally admitted that alcohol was directly or indirectly responsible for more mental and physical incapacity and suffering than any other single known cause of disease. Out of eleven cases of those who became insane, nine ultimately died insane, and of the remaining two, but 1 entirely recovered. The lunacy laws filled a big octavo volume, yet one clause forbidding the marriage of those in whom the taint existed, and another to prevent people driving themselves mad with drink would be worth the whole volume. Dr. Annie McCall, Director of the Clapham Maternity Hospital, suggested that all police should be total abstainers. Dr. Crespi, of Wimbourne, complained of the amount of ignorance which still prevailed amongst medical men on the temperance question; and Mr. W. S. Caine said that one of the great difficulties was the indiscriminate and ignorant manner in which large sections of the medical profession prescribed alcohol. Mrs. H. Kingsley complained of the way in which country doctors ordered alcohol; and Mr. Garrard, of Hackney, of the way in which Band of Hope members had broken their pledges owing to medical advice and sickness.]